

Bio Signal Total Solution

Fetal Monitor
Fetal & Vascular Doppler
Patient Monitor
Infant Incubator
Infant Warmer
Phototherapy
Breast Pump
Thermometer
Head Lamp



Fetal Monitor



BT-380 Fetal & Maternal Monitor I

- 1MHz Frequency with Twin Doppler
- 10.1" Color Touch Screen
- Fetal Monitoring : FHR, UC, DECG Maternal Monitoring : ECG, NIBP, SpO2, TEMP
- Option: DECG, Rechargeable battery, Acoustic Stimulator, Wifi, Cart

BT-350 LCD Fetal Monitor

- 1MHz Frequency with Twin Doppler
- 7" color TFT LCD Display
- CTG Analysis
- Option: Rechargeable battery, Acoustic Stimulator, Carrying bag, Cart





BT-350 LED Fetal Monitor I

- 1MHz Frequency with Twin Doppler
- Large 7 Segment LED Display
- Waterproof Probe (IPX 8)
- Option : Rechargeable battery, Acoustic Stimulator, Carrying bag, Cart

I BT-300 LED Fetal Monitor

- 1MHz Frequency with Twin Doppler
- Waterproof Probe (IPX 8)
- Option : Rechargeable battery, Acoustic Stimulator, Carrying bag, Cart



Fetal & Vascular Doppler

+ BT-200 Fetal Doppler

- 2/3 MHz Frequency
- Various Display Type (Sound only, LCD, Color)
- Waterproof Probe
- FHR and Sound management





BT-220 Fetal Doppler

- 2/3 MHz Frequency
- 2.4" Color LCD Display with FHR Trend Display
- Acoustic Stimulator Function
- BMI and Body fat Analysis



- 2/3 MHz Frequency
- 3.2" color TFT LCD Display with FHR Trend Display
- Rechargeable Battery





BT-200 Vascular Doppler I

- 2, 4, 5, 8 MHz Frequency
- LCD Display
- Interchangeable Waterproof Probe
- Low Battery Indicator

Patient Monitor

BT-780 Patient Monitor

- ECG, Resp., SpO2, NIBP, Temp., CO₂, IBP, Multi-gas, C.O.
- 15.6" Color Touch Screen
- Ultra slim design
- 5 hours operation on battery
- Smart Hook & stand
- HL 7 support
- Option : CO₂, IBP, Multi-gas, C.O., Printer, Masimo SpO2, WIFI



BT-770 Patient Monitor

- ECG, Resp., SpO2, NIBP, Temp., CO₂, IBP, Multi-gas, C.O.
- 12.1" Color Touch Screen
- Ultra slim design
- 5 hours operation on battery
- Smart Hook & stand
- ■HL 7 support
- Option : CO₂, IBP, Multi-gas, C.O., Printer, Masimo SpO2, WIFI





BT-740 Patient Monitor

- ECG, Resp., SpO2, NIBP, Temp., CO₂, IBP, Multi-gas, C.O.
- 8.4" Color Touch Screen
- Ultra slim design
- 6 hours operation on battery
- Smart Hook & stand
- HL 7 support
- Option : CO₂, IBP, Multi-gas, CO, Printer, Masimo SpO2, WIFI

Patient Monitor

BT-720 Vital Sign Monitor

- SpO2, Pulse
- 4.3" Color Touch Screen
- 8 hours operation on battery
- Fan-less design
- Rechargeable by USB charger
- Option: NIBP, Temp





BT-710 Pulse Oximeter H

- SpO2, Pulse
- Hand-held design
- 4.3" Color Touch Screen
- ■8 hours operation on battery
- Fan-less design
- Rechargeable by USB charger
- Option: CO₂



BT-750 Patient Monitor

- ECG, Resp., SpO2, NIBP, Temp., CO₂, IBP
- 10.4" Color LCD Display
- ■4 hours operation on battery
- Multi language support
- Option : CO₂, IBP, Printer, LAN, Cart, Wall mount

Neonate Care



BT-500 Infant Incubator 4

- Air / Skin Temperature servo control
- Humidity Servo Control
- Tilting bed
- Option: O2 Servo Control, O2 Monitoring, Masimo SpO2 & CCD Camera & External monitor, Lifting Stand, Weighing scale, Basket, IV Plate, IV Pole, Shelf

I BT-550 Infant Warmer

- Infrared Heater
- Pre-warm / Baby / Manual Mode
- APGAR Timer
- Option : Tilting, Masimo SpO2, Lifting Stand, Weighing scale, Basket, IV Plate, IV Pole, Oxygen delivery, Suction



BT-400 Phototherapy

- Blue LED Lamp
- Intensity Control (High/Low)
- 100,000 hours LED lifetime
- Timer function

4 BT-450 Phototherapy

- Blue LED (455 nm to 465 nm)
- Intensity Control (High/Low)
- Blanket Type
- 10 hours operation on battery
- Alarm for High Temperature



Others

HBT-100 Breast Pump

- Portable Type with Dual Pumping
- Massage / Expression / Memory Mode
- Backflow Prevention
- BPA / Latex Free





BT-150 Breast Pump

- Desktop Type with Dual Pumping
- Massage / Expression / Program Mode
- Various Vacuum Level and Cycle Control
- Option: Carrying bag, Car charging cable,
 Nursing Night Lamp, Additional bottle set,
 Rechargeable battery, Bluetooth for mobile app

+ Non-Contact Thermometer

- Fever Alert Function (Blue/Red Color)
- Measurement of Body and Object
- Protective Cap for Sensor (BT-35)
- Faster Measurement Time (BT-36)





BT-410 Head Lamp I

- Power LED Light with 6,000K Color Temperature
- Adjustable illumination (BT-410F)
- Adjustable Light Spot (BT-410A)
- Option: Loupe, Astral Lamp, Additional battery

BIO SIGNAL TOTAL SOLUTION

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Specifications: BT-780 15.6" Multi-parameter Patient Monitor

Functional Characteristics			
Display			
Type	Color TFT touch screen LCD		
Size and resolution	15.6", 1366 x 768 pixels		
ED CONTRACTOR OF THE CONTRACTO			
Alarm indicator	Yellow & red		
Adaptor power indicator	1 green		
Battery status indicator	1 green		
Audio			
	Alarm sound (45 ~ 85dB), key pressing sound		
Speaker	QRS sound, PR sound		
	Alarm sound meets the IEC60601-1-8		
Data Storage			
Trend	168hours, resolution: 1min		
Alarm event	200 physiological and 100 technical alarm events		
NiBp measurement result	1,000 groups		
Function			
Multi lan ann an	English, Turkish, Spanish, French, Polish, German,		
Multi-language	Italian, Hungarian		
Trend	Graphic/tabular		
Alarm			
Mode	Visual, audible, information, parameter flashing		
Alarm delay	Off, 1s, 2s, 3s, 4s, 5s, 6s, 7s, 8s		
Pause duration	1, 2, 3, 4, 5, 10, 15min or permanent		
System	Low battery		
Interface			
Auxiliary	Nurse call		
RJ45 (LAN)	CMS		
USB	S/W upgrade		
ECG			
Standard compliance	IEC60601-2-27		
·	3Lead : I, II, III		
Lead type	5Lead : I, II, aVR, aVL, aVF, V		
Display sensitivity (gain)	Auto, 1.25, 2.5, 5, 10, 20mm/mV		
Wave sweep speed	12.5, 25, 50mm/s		
	Diagnostic mode : 0.05 ~ 130Hz		
	Monitoring mode : 0.5 ~ 40Hz		
Band width	Surgery mode : 1 ~ 25Hz		
	Strong filter mode : 5 ~ 20Hz		
CMRR	> 100dB		
Notch	50/60Hz (can be set on or off)		
Differential input	> $5M\Omega$		
Electrode polarization voltage range	±400mV		
Baseline recovery time	< 5s after defibrillation (monitor and surgery mode)		
Calibration signal	1mV (peak-peak), accuracy ±3%		
	Measuring electrode: < 0.1µA		
Lead-off detection current	Drive electrode : < 1µA		
	Adult: 15 ~ 300bpm		
HR measuring range	Pediatric/Neonate : 15 ~ 350bpm		
HR measuring resolution	1bpm		
HR measurement accuracy	±1bpm or ±1%, whichever is greater		
measarement accuracy	Ventricular bigeminy : 80±1bpm		
	Slow alternating ventricular bigeminy : 60±1bpm		
HR accuracy & response to irregular rhythm	Rapid alternating ventricular bigeminy: 120±1bpm		
	Bidirectional systoles: 90±2bpm		
	Didirectional systoles . 30±20pm		

HR time to alarm for tachycardia	0.5/1/2mV, 206bpm ventricular tarchycardia : < 10s 1/2/4mV, 195bpm ventricular tarchycardia : < 5s	
	Adult: 16 ~ 300, 1bpm step	
HR alarm upper limit (bpm)	Pediatric/Neonate: 16 ~ 350, 1bpm step	
	Adult: 15 ~ 299, 1bpm step	
HR alarm lower limit (bpm)	Pediatric/Neonate: 15 ~ 349, 1bpm step	
	Detection range: ±2mV ~ ±700mV	
Pacing pulse identification	Pulse width: 0.2ms ~ 2.0ms	
De sin et prules en ere en LID	15s data	
Pacing pulse average HR		
Pacing pulse interval of HR Refreshing	Every second	
Pacing pulse HR change response time	≤ 10sec	
Pacing pulse tall T-wave suppression	2mV	
	Communication, configuration, selfcheck error	
	Lead off	
	HR high/low, PVCS high	
Alarm	Asystole, VF/VTA, R on T, Tachycardia/bradicardia, PVC	
	frequent/couplet/singlr/bigeminy/trigeminy, Miss Beat	
	Pacemaker not capture/work	
	Signal weak, ST-I, II, II high/low	
Respiration		
Measurement method	Trans-Thoracic impedance	
Operation modes	Auto	
Measuring lead	Lead RA-LA, RA-LL, LA-RL, LL-RL	
Wave gain	X0.5, x1, x2	
Respiratory impedance range	0.2 ~ 3 Ω	
Base line impedance	500 ~ 2,000Ω	
Sensitivity	1,2,3,4,5	
Wave sweep speed	6.25mm/s, 12.5mm/s, 25mm/s	
Measurement accuracy	±2rpm	
·	•	
Measurement range	$0 \sim 120$ rnm	
Measurement range	0 ~ 120rpm	
5	RR high/low	
Measurement range Alarm	RR high/low Apnea	
Alarm	RR high/low	
Alarm Temperature	RR high/low Apnea Respiration artifact	
Alarm Temperature Standard compliance	RR high/low Apnea Respiration artifact ISO80601-2-56	
Alarm Temperature Standard compliance Measurement method	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor	
Alarm Temperature Standard compliance Measurement method Measuring range	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor 0°C ~ 50.0°C (32°F ~ 122.0°F)	
Alarm Temperature Standard compliance Measurement method Measuring range Resolution	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C} (32^{\circ}\text{F} \sim 122.0^{\circ}\text{F})$ 0.1°C	
Alarm Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C} (32^{\circ}\text{F} \sim 122.0^{\circ}\text{F})$ 0.1°C $\pm 0.1^{\circ}\text{C}$ or $\pm 0.2^{\circ}\text{F}$ (without probe)	
Alarm Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C} (32^{\circ}\text{F} \sim 122.0^{\circ}\text{F})$ 0.1°C $\pm 0.1^{\circ}\text{C} \text{ or } \pm 0.2^{\circ}\text{F} \text{ (without probe)}$	
Alarm Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C} (32^{\circ}\text{F} \sim 122.0^{\circ}\text{F})$ 0.1°C $\pm 0.1^{\circ}\text{C} \text{ or } \pm 0.2^{\circ}\text{F} \text{ (without probe)}$ 2 $0.1^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C}/^{\circ}\text{F} \text{ step}$	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C} (32^{\circ}\text{F} \sim 122.0^{\circ}\text{F})$ 0.1°C $\pm 0.1^{\circ}\text{C}$ or $\pm 0.2^{\circ}\text{F}$ (without probe) 2 $0.1^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C}/^{\circ}\text{F}$ step $0^{\circ}\text{C} \sim 49.9^{\circ}\text{C}, 0.1^{\circ}\text{C}/^{\circ}\text{F}}$ step	
Alarm Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C} (32^{\circ}\text{F} \sim 122.0^{\circ}\text{F})$ 0.1°C $\pm 0.1^{\circ}\text{C}$ or $\pm 0.2^{\circ}\text{F}$ (without probe) 2 $0.1^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/°F}$ step $0^{\circ}\text{C} \sim 49.9^{\circ}\text{C}, 0.1^{\circ}\text{C/°F}$ step $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/°F}$ step	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C} (32^{\circ}\text{F} \sim 122.0^{\circ}\text{F})$ 0.1°C $\pm 0.1^{\circ}\text{C} \text{ or } \pm 0.2^{\circ}\text{F} \text{ (without probe)}$ 2 $0.1^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/}^{\circ}\text{F} \text{ step}$ $0^{\circ}\text{C} \sim 49.9^{\circ}\text{C}, 0.1^{\circ}\text{C/}^{\circ}\text{F} \text{ step}$ $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/}^{\circ}\text{F} \text{ step}$ $1^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/}^{\circ}\text{F} \text{ step}$ $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/}^{\circ}\text{F} \text{ step}$	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C} (32^{\circ}\text{F} \sim 122.0^{\circ}\text{F})$ 0.1°C $\pm 0.1^{\circ}\text{C}$ or $\pm 0.2^{\circ}\text{F}$ (without probe) 2 $0.1^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/°F}$ step $0^{\circ}\text{C} \sim 49.9^{\circ}\text{C}, 0.1^{\circ}\text{C/°F}$ step $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/°F}$ step	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C} (32^{\circ}\text{F} \sim 122.0^{\circ}\text{F})$ 0.1°C $\pm 0.1^{\circ}\text{C}$ or $\pm 0.2^{\circ}\text{F}$ (without probe) 2 $0.1^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/}^{\circ}\text{F}$ step $0^{\circ}\text{C} \sim 49.9^{\circ}\text{C}, 0.1^{\circ}\text{C/}^{\circ}\text{F}$ step $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/}^{\circ}\text{F}$ step 1°T , 1°T Sensor off 1°T T/T2 high/low, TD high	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp Standard compliance	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C} (32^{\circ}\text{F} \sim 122.0^{\circ}\text{F})$ 0.1°C $\pm 0.1^{\circ}\text{C} \text{ or } \pm 0.2^{\circ}\text{F} \text{ (without probe)}$ 2 $0.1^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/}^{\circ}\text{F} \text{ step}$ $0^{\circ}\text{C} \sim 49.9^{\circ}\text{C}, 0.1^{\circ}\text{C/}^{\circ}\text{F} \text{ step}$ $0^{\circ}\text{C} \sim 50.0^{\circ}\text{C}, 0.1^{\circ}\text{C/}^{\circ}\text{F} \text{ step}$ T1, T2 Sensor off T1/T2 high/low, TD high	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp Standard compliance Measurement method	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor 0°C ~ 50.0°C (32°F ~ 122.0°F) 0.1°C ±0.1°C or ±0.2°F (without probe) 2 0.1°C ~ 50.0°C, 0.1°C/°F step 0°C ~ 49.9°C, 0.1°C/°F step 0°C ~ 50.0°C, 0.1°C/°F step T1, T2 Sensor off T1/T2 high/low, TD high IEC80601-2-30 Automatic oscillometric method	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp Standard compliance Measurement method Operating mode	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor 0°C ~ 50.0°C (32°F ~ 122.0°F) 0.1°C ±0.1°C or ±0.2°F (without probe) 2 0.1°C ~ 50.0°C, 0.1°C/°F step 0°C ~ 49.9°C, 0.1°C/°F step 11, T2 Sensor off T1/T2 high/low, TD high IEC80601-2-30 Automatic oscillometric method Manual, automatic, continuous(STAT)	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp Standard compliance Measurement method Operating mode Useful life	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor 0°C ~ 50.0°C (32°F ~ 122.0°F) 0.1°C ±0.1°C or ±0.2°F (without probe) 2 0.1°C ~ 50.0°C, 0.1°C/°F step 0°C ~ 49.9°C, 0.1°C/°F step 0°C ~ 50.0°C, 0.1°C/°F step T1, T2 Sensor off T1/T2 high/low, TD high IEC80601-2-30 Automatic oscillometric method Manual, automatic, continuous(STAT) 100,000 times	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp Standard compliance Measurement method Operating mode Useful life Measurement interval in automatic mode	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor 0°C ~ 50.0°C (32°F ~ 122.0°F) 0.1°C ±0.1°C or ±0.2°F (without probe) 2 0.1°C ~ 50.0°C, 0.1°C/°F step 0°C ~ 49.9°C, 0.1°C/°F step 0°C ~ 50.0°C, 0.1°C/°F step T1, T2 Sensor off T1/T2 high/low, TD high IEC80601-2-30 Automatic oscillometric method Manual, automatic, continuous(STAT) 100,000 times 1/2/3/4/5/10/15/30/60/90/120/180/240/480min	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp Standard compliance Measurement method Operating mode Useful life	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor 0°C ~ 50.0°C (32°F ~ 122.0°F) 0.1°C ±0.1°C or ±0.2°F (without probe) 2 0.1°C ~ 50.0°C, 0.1°C/°F step 0°C ~ 49.9°C, 0.1°C/°F step 0°C ~ 50.0°C, 0.1°C/°F step T1, T2 Sensor off T1/T2 high/low, TD high IEC80601-2-30 Automatic oscillometric method Manual, automatic, continuous(STAT) 100,000 times	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp Standard compliance Measurement method Operating mode Useful life Measurement interval in automatic mode	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor 0°C ~ 50.0°C (32°F ~ 122.0°F) 0.1°C ±0.1°C or ±0.2°F (without probe) 2 0.1°C ~ 50.0°C, 0.1°C/°F step 0°C ~ 49.9°C, 0.1°C/°F step 0°C ~ 50.0°C, 0.1°C/°F step T1, T2 Sensor off T1/T2 high/low, TD high IEC80601-2-30 Automatic oscillometric method Manual, automatic, continuous(STAT) 100,000 times 1/2/3/4/5/10/15/30/60/90/120/180/240/480min	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp Standard compliance Measurement method Operating mode Useful life Measurement interval in automatic mode	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor 0°C ~ 50.0°C (32°F ~ 122.0°F) 0.1°C ±0.1°C or ±0.2°F (without probe) 2 0.1°C ~ 50.0°C, 0.1°C/°F step 0°C ~ 49.9°C, 0.1°C/°F step 11, T2 Sensor off T1/T2 high/low, TD high IEC80601-2-30 Automatic oscillometric method Manual, automatic, continuous(STAT) 100,000 times 1/2/3/4/5/10/15/30/60/90/120/180/240/480min 20~40s	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp Standard compliance Measurement method Operating mode Useful life Measurement interval in automatic mode Typical measurement time	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor 0°C ~ 50.0°C (32°F ~ 122.0°F) 0.1°C ±0.1°C or ±0.2°F (without probe) 2 0.1°C ~ 50.0°C, 0.1°C/°F step 0°C ~ 49.9°C, 0.1°C/°F step 0°C ~ 50.0°C, 0.1°C/°F step T1, T2 Sensor off T1/T2 high/low, TD high IEC80601-2-30 Automatic oscillometric method Manual, automatic, continuous(STAT) 100,000 times 1/2/3/4/5/10/15/30/60/90/120/180/240/480min 20~40s Systolic: Adult(30~280), Pediatric(30~230), Neonate(30~145) Mean: Adult(10~240), Pediatric(10~175), Neonate(10~115)	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp Standard compliance Measurement method Operating mode Useful life Measurement interval in automatic mode Typical measurement time Normal mode measuring range (mmHg)	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor 0°C ~ 50.0°C (32°F ~ 122.0°F) 0.1°C ±0.1°C or ±0.2°F (without probe) 2 0.1°C ~ 50.0°C, 0.1°C/°F step 0°C ~ 49.9°C, 0.1°C/°F step 11, T2 Sensor off T1/T2 high/low, TD high IEC80601-2-30 Automatic oscillometric method Manual, automatic, continuous(STAT) 100,000 times 1/2/3/4/5/10/15/30/60/90/120/180/240/480min 20~40s Systolic: Adult(30~280), Pediatric(30~230), Neonate(30~145) Mean: Adult(10~240), Pediatric(10~175), Neonate(10~115) Diastolic: Adult(10~220), Pediatric(10~165), Neonate(10~105)	
Temperature Standard compliance Measurement method Measuring range Resolution Measurement accuracy Number of channel T1/T2 alarm upper limit T1/T2 alarm lower limit Temperature difference alarm upper limit Alarm NiBp Standard compliance Measurement method Operating mode Useful life Measurement interval in automatic mode Typical measurement time	RR high/low Apnea Respiration artifact ISO80601-2-56 Thermistor 0°C ~ 50.0°C (32°F ~ 122.0°F) 0.1°C ±0.1°C or ±0.2°F (without probe) 2 0.1°C ~ 50.0°C, 0.1°C/°F step 0°C ~ 49.9°C, 0.1°C/°F step 11, T2 Sensor off T1/T2 high/low, TD high IEC80601-2-30 Automatic oscillometric method Manual, automatic, continuous(STAT) 100,000 times 1/2/3/4/5/10/15/30/60/90/120/180/240/480min 20~40s Systolic: Adult(30~280), Pediatric(30~230), Neonate(30~145)	

	Adult : 160 (default)	
	· · · · · · · · · · · · · · · · · · ·	
	Pressure setting range:140mmHg, 160mmHg, 180mmHg Pediatric: 140 (default)	
Initial inflation pressure (mmHg)	Pressure setting range:140mmHg, 160mmHg	
	Neonate: 100 (default)	
	Pressure setting range:100mmHg, 120mmHg	
	Adult: 300mmHg	
Overpressure protection point (software)	Pediatric: 240mmHg	
crespressure protections point (contract)	Neonate: 150mmHg	
	Adult: 320~330mmHg	
Overpressure protection point (hardware)	Pediatric: 265~275mmHg	
cre.pressure protection point (naramare)	Neonate: 160~165mmHg	
Static Pressure accuracy	±3mmHg	
Supply voltage	10V~14VDC	
Maximum power consumption	3.6W	
Quiescent current	50mA	
Maximum current during measurement	180mA	
Maximum current during inflation	300mA	
maximum current during illiation	Communication, selfcheck, CFG error	
	System error, measurement timeout	
	Cuff loose, no, leak, type error	
	Air pressure error	
Alarm	Over range, signal weak/unstable/saturated	
	Over pressure	
	Module reset failed	
SpO2	Systolic, mean, diastolic high/low	
Standard compliance	ISO80601-2-61	
•	0% ~ 100%	
Display range		
SpO2 display resolution	1% Adult/Pediatric: 70 ~ 100% ±2%	
SnO3 accuracy	· ·	
SpO2 accuracy	Neonate: 70 ~ 100% ±3%	
	0 ~ 69% : Unspecified	
Mayo sugar speed		
Wave sweep speed	12.5mm/s, 25mm/s	
Wave mode	Scan, fill	
• •	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level	
Wave mode	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100%	
Wave mode Pulse volume SpO2 alarm preset limits	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99%	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1%	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20%	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index PR Measurement Range	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20% 25 ~ 250 bpm	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index PR Measurement Range PR Resolution	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20% 25 ~ 250 bpm ±1 bpm	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index PR Measurement Range	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20% 25 ~ 250 bpm ±1 bpm ±2% or ±2bpm, whichever is greater	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index PR Measurement Range PR Resolution	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20% 25 ~ 250 bpm ±1 bpm ±2% or ±2bpm, whichever is greater Communication stop/error	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index PR Measurement Range PR Resolution PR Measurement accuracy	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20% 25 ~ 250 bpm ±1 bpm ±2% or ±2bpm, whichever is greater Communication stop/error No sensor/ sensor off	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index PR Measurement Range PR Resolution	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20% 25 ~ 250 bpm ±1 bpm ±2% or ±2bpm, whichever is greater Communication stop/error No sensor/ sensor off Search timeout	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index PR Measurement Range PR Resolution PR Measurement accuracy	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20% 25 ~ 250 bpm ±1 bpm ±2% or ±2bpm, whichever is greater Communication stop/error No sensor/ sensor off Search timeout Search pulse(weak)	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index PR Measurement Range PR Resolution PR Measurement accuracy Alarm	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20% 25 ~ 250 bpm ±1 bpm ±2% or ±2bpm, whichever is greater Communication stop/error No sensor/ sensor off Search timeout	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index PR Measurement Range PR Resolution PR Measurement accuracy Alarm IBP (Option)	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20% 25 ~ 250 bpm ±1 bpm ±2% or ±2bpm, whichever is greater Communication stop/error No sensor/ sensor off Search timeout Search pulse(weak) SpO2, RR high/low	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index PR Measurement Range PR Resolution PR Measurement accuracy Alarm IBP (Option) Standards compliant	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20% 25 ~ 250 bpm ±1 bpm ±2% or ±2bpm, whichever is greater Communication stop/error No sensor/ sensor off Search timeout Search pulse(weak)	
Wave mode Pulse volume SpO2 alarm preset limits SpO2 alarm preset accuracy SpO2 alerting signal generates delay SpO2 value refresh period SpO2 value refresh delay Average period Perfusion index PR Measurement Range PR Resolution PR Measurement accuracy Alarm IBP (Option)	Scan, fill 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 level Upper Alarm Limit: 86% ~ 100% Lower Alarm Limit: 85% ~ 99% ±1% Off,1s,2s,3s,4s,5s,6s,7s,8s 1s/time < 10s Low Sensitivity: 7 ~ 8s Intermediate Sensitivity: 4 ~ 6s Advanced Sensitivity: 2 ~ 3s 0.05 ~ 20% 25 ~ 250 bpm ±1 bpm ±2% or ±2bpm, whichever is greater Communication stop/error No sensor/ sensor off Search timeout Search pulse(weak) SpO2, RR high/low	

Droccure measurement accuracy	+2 mmHa ar+30/ whichover is greater	
Pressure measurement accuracy Pressure resolution	±3 mmHg or±2%, whichever is greater	
	1 mmHg 35 ~ 250 bpm	
PR measurement range	±3bpm	
PR measurement accuracy PR resolution	1bpm	
	5μV/V/mmHg	
Transducer sensitivity Transducer resistance range	300-3,000Ω	
Supply voltage	+12VDC	
Maximum power consumption	+12VDC ≤5W	
Scan speed		
scan speed	12.5mm/s, 25mm/s	
	IBP1, 2 communication stop/error IBP1, 2 sensor off	
	·	
Alarm	Art-sys, PA-sys, P1-sys, P2-sys high	
	Art-dia, PA-dia, P1-dia, P2-dia high Art-mean, PA-mean, CVP-mean, LAP-mean, RAP-mean, ICP-	
F1CO2 Main streets 0. Cide streets (Outline)	mean, P1-mean, P2-mean high	
EtCO2 Mainstream & Sidestream (Option)	E+CO2 EiCO2 AwPD	
Measuring range	EtCO2、FiCO2、AwRR	
Measuring range	0-15%	
Accuracy	±0.2%+2% of the reading	
Resolution	EtCO2/FiCO2 : 1mmHg, AwRR : 1rpm	
Rise time	200ms, typical at 50ml/min flow rate	
Total response time	within 3 seconds(within 2m Nomoline sampling)	
AWRR range	0-150bpm	
AWRR Accuracy	±1 breath	
Apnea delay	20s, 25s, 30s, 35s, 40s, 45s, 50s, 55s, 60s	
Warm-up time	Full accuracy within 10 seconds	
Sampling flow rate	50ml/min(+/-10ml/min)	
Operating mode	Standby, measure	
O2 compensation	Low, mid, high	
N2O compensation	On, off	
	EtCO2 lower limit : 0~149mmHg	
Alarm limit	EtCO2/FiCO2 upper limit: 1~150mmHg	
	AWRR lower limit : 0~119rpm	
	AWRR upper limit : 1~120rpm	
	Communication stop/error	
	CO2 sensor off/error	
	O2 sensor error/replace	
	adaptor/sampling line no/check	
	Parameter accuracy error	
	O2, Air calibration error	
	S/W, H/W error	
	Motor accuracy error	
Alarm	CO2 factory calibration error	
7.101111	Adaptor, sampling line replace	
	O2 port error	
	CO2, O2, N2O out of accuracy	
	CO2 temp., pressure out of accuracy	
	CO2 zero required	
	CO2 zeroing/sleeping	
	CO2 module calibrating/calibration error	
	EtCO2, FiCO2, AWRR high/low	
	Apnea	
C.O. (Cardiac Output : Option)		
Method	Thermodilution	
	C.O.: 0.2 ~ 20 L/min	
Measurement range	BT : 23 ~ 45℃±0.5 ℃	
	IT : 0 ~ 20°C±0.5 °C	

Resolution factor	C.O.: 0.1L/min	
	BT, IT : 0.1℃	
Accuracy	C.O.: ±10%	
	TB, TI : ±0.5℃	
	BT high limit : (Low limit +0.1) ~ 43°C	
Scope of alarm limit	BT low limit : 23.0 ~ (high limit -0.1) °C	
	Step size : 0.1℃	
	BT sensor off	
Alarm	BT high/low	
Printer (Option)	C.O. high	
	Thermal dot array	
Type Print speed	12.5, 25, 50mm/s	
Paper size	50mm(W) x 2m	
Power	3011111(VV) X 2111	
	Input : AC 100 ~ 240V (50/60Hz)	
Adaptor	Input Current: 1.6-0.6A	
Consumption	13.5W	
I	11.1V Li-ion 4,400mA	
Rechargeable battery	Operating Time : 5hrs	
	Charging Time : 4hrs	
Standard Configurations		
ECG cables and lead wire	1ea (5lead)	
ECG electrode for adult	1pack (25pcs)	
SpO2 adult reusable sensor	1ea	
SpO2 extension cable	1ea	
NiBp adult cuff	1ea	
NiBp extension tube	1ea	
Temperature sensor	1ea	
Power adaptor	1ea	
Bracket	1ea	
Operation manual	1ea	
Options (Function)		
IBP	Sensor cable & package	
EtCO2 Mainstream (Bistos)	Airway adaptor & module	
EtCO2 Sidestream (Bistos)	Sampling tube	
EtCO2 IRMA Mainstream (Masimo)	Airway adaptor & module	
EtCO2 ISA Sidestream (Masimo)	Sampling tube	
C.O.	Sensor cable	
Printer	Printer & paper	
Options (Accessory)		
ECG cables and lead wire	5/3 lead	
ECG clables and read wire	adult/neonate	
SpO2 reusable sensor	adult/pediatric/neonate	
SpO2 disposable sensor	adult/pediatric/neonate	
Skin & rectal temperature sensor	adult/pediatric/neonate	
NiBp cuff	adult(27~35cm)/pediatric(14~21.5cm)/neonate(4*9cm)	
Physical Characteristics	,	
Dimension		
Main unit	410(W) X 298(H) X 120(D)	
Packing	495(W) x 295(D) x 385(H)mm	
Weight		
Main unit	< 4.9Kg	
Packing	7kg	
Environmental Conditions		
Operating temperature	5 ~ 40°C (41 ~ 104°F)	
Operating humidity	30 ~ 85% non-condensing	

Storage temperature	−20 ~ 60°C (−4 ~ 140°F)
Storage humidity	0 ~ 95% non-condensing
Warranty	
Main unit	2 years
Optional sensor & accessory	1 year
Certificates	
KFDA, CE	



EC CERTIFICATE Full Quality Assurance System

Certificate No.: 243269-2017-CE-KOR-NA-PS Rev. 4.0

Project No.: PRJC-533956-2015-MSL-KOR

Valid Until: 01 September 2023

This is to certify that the quality system of:

Bistos Co., Ltd.

7th Fl., A Bldg., Woolim Lions Valley 5-cha, 302, Galmachi-ro, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea

For design, production and final product inspection/testing of:

Monitoring devices of vital physiological parameters and Utilising non-ionizing radiation

Has been assessed with respect to:

The conformity assessment procedure described in Annex II excluding section 4 of Council Directive 93/42/EEC on Medical Devices, as amended

and found to comply

Further details of the product(s) and conditions for certification are given overleaf

Place and date: Høvik, 26 April 2021

Check Validity

For the issuing office: Notified Body 2460 DNV Product Assurance AS



Eugenie Winger Husebye
Technical Reviewer



Certificate No.: 243269-2017-CE-KOR-NA-PS Rev. 4.0

Place and date: Høvik, 26 April 2021

Jurisdiction

Application of Council Directive 93/42/EEC of 14 June 1993, adopted as "Forskrift om Medisinsk Utstyr" by the Norwegian Ministry of Health and Care Services.

Certificate history:

Revision	Description	Issue Date
0.0	Replaces certificate EU1308401, Rev2.0 (NB 0470) following transfer of Notified Body functions to DNV GL Nemko Presafe AS (NB 2460)	01 September 2017
1.0	EU Rep change	13 April 2018
2.0	Re-certification for Fetal monitor and Neonatal Phototherapy unit (BT-300, BT-350, FM-20, Biocare FM-1, BT-400) Scope extension for pulse oximeter and patient monitor (BT-710, BT-720, BT-740, BT-770) The accessories (Feotal Doppler system probe and Cardiotocograph transducers) are removed (AY-DOP-300, AY-DOP-350, AY-UC-300, AY-UC-350)	01 September 2018
3.0	Editorial change	13 February 2020
4.0	Scope extension to new model (BT-780)	26 April 2021

Products covered by this Certificate:

Product Description	Product Name	Class
Fetal monitor	 BT-200 BT-350 FM-20 Biocare FM-1 	lla
Neonatal Phototherapy unit	■ BT-400	lla
Pulse Oximeter	■ BT-710	IIb
Patient Monitor	 BT-720 BT-740 BT-770 BT-780 	IIb

The complete list of devices is filed with the Notified Body



Certificate No.: 243269-2017-CE-KOR-NA-PS Rev. 4.0

Place and date: Høvik, 23 April 2021

Sites covered by this certificate

Site Name	Address
Bistos Co., Ltd.	7th Fl., A Bldg., Woolim Lions Valley 5-cha, 302, Galmachi-ro, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea

EU Representative

OBELIS S.A, Bd. General Wahis, 53, 1030 Brussels, Belgium





Certificate No.: 243269-2017-CE-KOR-NA-PS Rev. 4.0

Place and date: Høvik, 23 April 2021

Terms and conditions

The certificate is subject to the following terms and conditions:

- Any producer (see 2001/95/EC for a precise definition) is liable for damage caused by a
 defect in his product(s), in accordance with directive 85/374/EEC, as amended, concerning
 liability of defective products.
- The certificate is only valid for the products and/or manufacturing premises listed above.
- The Manufacturer shall fulfil the obligations arising out of the quality system as approved and uphold it so that it remains adequate and efficient.
- The Manufacturer shall inform the Notified Body of any intended updating of the quality system and the Notified Body will assess the changes and decide if the certificate remains valid.
- Periodical audits will be held, in order to verify that the Manufacturer maintains and applies
 the quality system. the Notified Body reserves the right, on a spot basis or based on
 suspicion, to pay unannounced visits.

The following may render this Certificate invalid:

- Changes in the quality system affecting production.
- Periodical audits not held within the allowed time window.

Conformity declaration and marking of product

When meeting with the terms and conditions above, the producer may draw up an EC declaration of conformity and legally affix the CE mark followed by the Notified Body identification number.

End of Certificate



Management System Certificate

Certificate No.: 243275-2017-AQ-KOR-NA-PS Rev 4.0

Initial Certification Date: 12 August 2004

Valid Until: 09 September 2024

This is to certify that the quality system of:

Bistos Co., Ltd.

7th Fl., A Bldg., Woolim Lions Valley 5-cha, 302, Galmachi-ro, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea

has been found to conform to the Quality Management System standard:

ISO 13485:2016/NS-EN ISO 13485:2016

This certificate is valid for the following scope:

Design and Development, Manufacturing, Sales, Distribution, and Servicing of Ultrasound Doppler system, Fetal monitor, Phototherapy, Patient Monitor, Pulse Oximeter, Incubator, Head-worn light, Infant Warmer and Electric Breast Pump.

Place and date: Høvik, 23 June 2021

Check Validity



NORWEGIAN ACCREDITATION For the issuing office: **DNV Product Assurance AS**

Tone Elise Kolpus Lead Auditor

MSYS 018

ficate is subject to terms and conditions as set out in the Certification Agreement. Failure to comply may render this Certificate invalid.



Certificate No.: 243275-2017-AQ-KOR-NA-PS Rev. 4.0 Place and date: Høvik, 22 June 2021

Site Name	Address	Site Specific Scope
Head Office	7th Fl., A Bldg., Woolim Lions Valley 5-cha, 302, Galmachi-ro, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea	Design and Development, Sales, Distribution, and Servicing of Ultrasound Doppler system, Fetal monitor, Phototherapy, Patient Monitor, Pulse Oximeter, Incubator, Head-worn light, Infant Warmer and Electric Breast Pump.
Factory	116~122ho, Jungang Induspia 3, 27, Sagimakgol-ro 105beon-gil, Jungwon-gu, Seongnam-si, Gyeonggi-do, Korea	Manufacturing of Ultrasound Doppler system, Fetal monitor, Phototherapy, Patient Monitor, Pulse Oximeter, Incubator, Head-worn light, Infant Warmer and Electric Breast Pump.