**Comprehensive maternal/fetal monitoring**

Every pregnancy is unique. So... the monitor you choose needs to help you manage the total pregnancy — from antepartum monitoring through labor, delivery and recovery.

The compact and easy-to-use Corometrics 120 Series is also the most comprehensive maternal/fetal monitor, giving you the ability to address every monitoring need for both the mother and the fetus. You can begin by using the external monitoring modes and add noninvasive BP, FECG, IUP, maternal and/or fetal pulse oximetry, as the patient’s needs change, without switching to another monitor or external device.

Corometrics 120 Series sets new standards for maternal/fetal care.

- **Our unique Spectra Alerts™** transforms the powerful 120 Series into a “Smart” monitor, complete with alert functions. This feature analyzes the fetal heart rate (FHR) and uterine activity (UA) patterns, as well as trend characteristics of variability, baseline, decelerations, and signal quality to assist the clinicians in evaluating the fetal strip.

- **Smart BP™**, a patented feature that works in conjunction with DINAMAP® non-invasive blood pressure technology, automatically delays a blood pressure measurement while a contraction is in progress thus assuring more clinically significant assessment and documentation of the maternal status.

- **Heart Beat Coincidence (HBC)** alerts the care provider with both visual and recorded messages when there is a possibility that you may be recording the same heart rate with two modes of monitoring. The monitor compares up to three heart rates and provides additional information for fetal assessment.

- **Fetal Pulse Oximetry (FSpO₂)** is an optional parameter that provides a real-time oxygen status of the fetus. In combination with other fetal parameters, FSpO₂ helps in the early detection of fetal hypoxia and provides additional information in the presence of non-reassuring fetal heart rate patterns.

*This technology is not available in all countries.

### Other Features:

- **Maternal ECG** real-time 3-lead adult QRS waveform display and a snapshot printout.
- **Vital Signs History** at a glance. Documents 8 hours of maternal parameters in flowchart summary format... a time-saver during recovery.
- **Software upgrade**, via PC or laptop computer, allows easy flash reprogramming as new features become available.
- **Expandability** built in. System architecture allows for the addition of future parameters without purchasing a new unit.
- **High/Low Fetal Alarms** notify clinicians if the fetal heart rate is out of the user-configurable range.
- **Selectable Font Size** on the recording strip allows the font size to be adjusted quickly and easily (small, medium or large) for optimum viewing efficiency.
- **Song Player** serenades both mother and child to celebrate the new arrival. Three popular tunes are available with the turn of the Trimknob®.

---

<table>
<thead>
<tr>
<th>MODEL</th>
<th>Real Heart Rate (QRS)</th>
<th>FECG</th>
<th>TOCO/IUP</th>
<th>NIBP</th>
<th>MSpO₂</th>
<th>MECG</th>
<th>FSpO₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>126</td>
<td>✓</td>
<td>✓</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>126F</td>
<td>✓</td>
<td>✓</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>✓</td>
<td>—</td>
</tr>
<tr>
<td>128</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>128F</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>—</td>
<td>✓</td>
</tr>
<tr>
<td>129</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>129F</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Performance Specifications

Ultrasound Mode
Technique: Pulse Doppler with autocorrelation processing
Transducer Type: 9-crystal
Pulse Reception Frequency:
  Single Ultrasound Mode: 4 kHz
  Dual Ultrasound Mode: 2 kHz
Pulse Duration: 92 µs
Transmitter Frequency: 1.151 MHz
Intensity: < 5 mW/cm² (Isata)
Heart Rate Counting Range: 50 – 210 BPM
Leakage Current: < 10 µA at 120 – 240 VAC, isolated by transducer

FECCG Mode
Technique: Peak detecting, beat-to-beat cardiotachometer
Heart Rate Counting Range: 30 – 240 BPM
Heart Rate Resolution: ± 1 BPM
Artifact Elimination: Switch selectable, ± 25 BPM artifact rejection
Countable Input Signal Range: 15 µV to 2 mV peak-to-peak
Offset Voltage Tolerance (Differential): ± 300 mVdc maximum
Maximum Common Mode Voltage: 20 V peak-to-peak
Preamplifier Bandwidth: 1 – 100 Hz
Common Mode Rejection:
  Balanced: > 120 dB at mains frequency, with patient cable
  Unbalanced: 5kΩ RA or LA: > 110 dB at mains frequency
Input Equivalent Noise: < 10 µV peak-to-peak
Input Impedance:
  Differential: > 10 MΩ
  Common Mode: > 20 MΩ
Mains Frequency Rejection: > 40 dB
Leakage Current: < 60 µA at 254 VAC, electrically isolated
Leg Plate Tester Jack: Simulated R-Wave at 120 ± 1 BPM

Fetal Alarms (for ultrasound or FECCG modes)
Audio: Alternating 1.5 second chimes (773 Hz and 523 Hz)
Visual: Flashing heart rate numeric
Limits: User-selectable high and low fetal heart rate
Technical: Signal quality
Tachycardia Response Time: 5 minutes at 100% limit violation
Bradycardia Response Time: 30 seconds at 100% limit violation
Signal Quality Response Time:
  100% Signal Loss: 1.25 minutes
  70% Signal Loss: 5 minutes
  65% Signal Loss: 10 minutes

Fetal Pulse Oximetry Mode
Technique: Spectrophotometry and plethysmography
Sensor Type: Nellcor OxiFirst Fetal Oxygen Sensor (Series FS14) only.
  (Available from Nellcor/TYCO International)
Saturation Range: 10 – 100%
Saturation Accuracy: Reproducibility is one standard deviation = 4.7%. Nominally, 67 of the measurements across the population will be within ± standard deviation
Wavelengths:
  Red: 755 µM, nominal
  Infrared: 890 µM, nominal
Response Time: User-selectable: slow and fast averaging modes
Transmitter Frequency: 1.151 mHz
Spatial-Peak Temporal Average Intensity: Ispta < 10 mW/cm²

Uterine Activity Mode
Range:
  Strain Gauge: 0 – 100 mmHg
  Tocotransducer: 0 – 100 relative units
Resolution:
  Strain Gauge: 1 mmHg
  Tocotransducer: 1 relative unit
Bandwidth:
  Strain Gauge: dc to 0.5 Hz
  Tocotransducer: dc to 0.5 Hz
Excitation Voltage:
  Strain Gauge: + 4.0 Vdc
Zero Set Temperature Drift:
  Strain Gauge: < 0.1 mmHg/˚C
  (0.013 kPa/˚C), excluding transducer
Leakage Current:
  Strain Gauge: < 60 µA at 254 VAC, electrically isolated

Maternal Blood Pressure Mode
Technique: Oscillometric
Blood Pressure Range: 20 – 255 mmHg (2.7 – 34.0 kPa)
Pulse Rate Range: 40 – 240 BPM
Blood Pressure Accuracy: ± 5 mmHg (0.7 kPa) with a standard deviation no greater than 8 mmHg (1.1 kPa)
Pulse Rate Accuracy: ± 2 BPM or ± 2% (whichever is greater)
Cuff Inflation: Initial inflation to 160 mmHg (21.3 kPa), Subsequent inflation approximately 30 mmHg (4.0 kPa) greater than previous systolic pressure
Cuff Deflation: Automatic
Safety Features:
  Automatic Cuff Deflation if:
    – Cuff pressure exceeds 280 mmHg (37.3 kPa)
    – Maximum measurement time exceeded (not to exceed AAMI SP10 limit of 180s)
    – Safety timer detects microprocessor failure
  Auto mode minimum 30-second delay from the end of one determination to the beginning of another to allow for venous return
Display/Record: Systolic, diastolic, and mean pressure; pulse rate
Alarms (Audible and Visual):
  Audio: Alternating 1.5 second chimes (773 Hz and 523 Hz)
  Visual: Flashing numeric or message
Limits/User-selectable high and low systolic, diastolic, and mean pressures; user-selectable high and low pulse rate
Technical: Cuff/hose errors, connection errors, insufficient signal, excessive inflation/motion or determination times, overpressure, communication problem, or self-test failure.
The blood pressure module complies with the American National Standard for Electronic or Automated Sphygmomanometers (AAMI/ANSI SP10-1992)

Maternal Pulse Oximetry Mode
Sensor Type: Nellcor Puritan Bennett
(D-25 or D-25L recommended)
Saturation Range: 0 – 100%
Pulse Rate Range: 30 – 250 BPM
Saturation Accuracy: [%SpO2 ± 1 standard deviation*]:
  (with Nellcor Puritan Bennett D-25 Sensor)
  70 – 100% ± 2 digits
  50 – 69% ± 3 digits
  0 – 49% (unspecified)
Pulse Rate Accuracy: ± 3 BPM
Alarms (Audio and Visual):
  Audio: Alternating 1.5 second chimes
  Visual: Flashing %SpO2 numeric or message
Limits: User-selectable high and low SpO2 and high and low pulse rate
Technical: Sensor errors, connection errors, insufficient signal, excessive motion, communication problem, internal calibration error, or self-test failure

MECG Mode
Maternal ECG Electrode Type: Medtronic 1700-003 or equivalent
Leads Available: I, II, and III
Heart Rate Counting Range: 30 – 240 BPM
Heart Rate Resolution: ± 1 BPM
Heart Rate Averaging: 1 second average
Countable Input Signal Range: < 0.5 mV to 5 mV peak-to-peak
Tall T-wave Rejection: > 0.8 x QRS amplitude
Offset Voltage Tolerance (Differential): ± 300 mVdc maximum
Maximum Common Mode Voltage: 20 V peak-to-peak
Preamplifier Bandwidth: 0.6 to 40 Hz
Common Mode Rejection:
  Balanced: > 80 dB at mains frequency, with patient cable
  Unbalanced: 5k RA or LA: > 50 dB at mains frequency
Input Equivalent Noise: < 30 µV peak-to-peak
Input Impedance: Differential: > 2.5 MΩ
  Common Mode: > 10 MΩ

Mains Frequency Rejection: > 40 dB
Leakage Current: < 60 µA at 254 VAC, with cable, electrically isolated
Isolation, Mains-to-Patient: > 4 kVAC
Leads Off Detection: dc current < 0.1 µA
Alarms:
  Audio: Alternating 1.5 second chimes
  Visual: Flashing heart rate numeric or message
Limits: User-selectable high and low maternal heart rate
Technical: Leads off
Tachycardia Response Time: < 8 seconds
Pacemaker Detection/Rejection:
  Input Voltage Range: ± 2.5 mV to ± 700 mV
  Input Pulse Width: 0.1 to 2 ms
  Pulse Rise/Fall Time: < 10% of pulse width; not greater than 100 µs
  Over-, Under-Shoot: 2 mV
Baseline Drift: < 0.5 V with a ± 700 mV, 2 ms pacemaker pulse applied. Excessive overshoot time of pacemaker pulse may cause false QRS detection

Maternal Vital Signs History: Storage/Recall (8 hrs maximum)

Strip Chart Recorder
Heart Rate Scale:
  Chart Width: Domestic: 7 cm
  International: 8 cm
  Scaling: Domestic: 30 BPM/cm
  International: 20 BPM/cm
  Range: Domestic: 30 – 240 BPM
  International: 50 – 210 BPM
  Resolution: Domestic: 1 BPM
  International: 1 BPM

Uterine Activity Scale:
  Chart Width: Strain Gauge: 4 cm
  Tocotransducer: 4 cm
  Scaling: Strain Gauge: 25 mmHg/cm
  Tocotransducer: 25 relative units/cm
  Range: Strain Gauge: 0 – 100 mmHg
  Tocotransducer: 0 – 100 relative units
  Resolution: Strain Gauge: 1 mmHg
  Tocotransducer: 1 relative unit

Pulse Oximetry %SpO2 Scale:
  Chart Width: Domestic: 4 cm
  International: 4 cm
  Scaling: Domestic: 10%/cm or 25%/cm
  International: 2.5%/cm or 25%/cm
  Range: Domestic: 60 – 100% or 0 – 100%
  International: 50 – 100% or 0 – 100%
  Resolution: Domestic: 1%
  International: 1%

Recorder Drives:
  Speeds: 1, 2, and 3 cm/min
  Speed Accuracy: ± 1%
Power Requirements
Line Voltage: 100, 120, 220, 230, 240 VAC
Line Frequency: 50/60 Hz
Power Consumption: 100W/0.4 A maximum

Physical Specifications
Height: 6.7 in (17.0 cm)
Width: 16.5 in (41.9 cm)
Depth: 17.3 in (43.9 cm)
Weight: 24.0 lbs (10.9 kg) approximate

Environmental Specifications

Monitor
Ambient Temperature:
Operating: 50°F to 104°F (10°C to 40°C)
Storage: 14°F to 131°F (–10°C to 55°C)
Relative Humidity:
Operating: 10% to 95%, non-condensing
Storage: 0% to 95%, non-condensing
Atmospheric Pressure:
Operating: 700 – 1060 mbar (525 – 795 mmHg)
Storage: 700 – 1060 mbar (525 – 795 mmHg)

Strip Chart Paper
Ambient Temperature:
Operating: 50°F to 104°F (10°C to 40°C)
Storage: < 80°F (< 26.5°C)
Relative Humidity:
Operating: 30% to 70%, non-condensing
Storage: 45% to 65%, non-condensing
Atmospheric Pressure:
Operating: 700 – 1060 mbar (525 – 795 mmHg)
Storage: 700 – 1060 mbar (525 – 795 mmHg)

Certification

ANSI/AAMI EC 13-1992:
Complies with all areas except those listed below:
3.1.2.1e: Heart rate meter accuracy and response to irregular rhythm (not tested)
3.2.6.1: Range of QRS wave amplitude and duration
3.2.8.1: Lower alarm limit (the lowest alarm limit on the 120 Series is 35 BPM)
3.2.9.8c: Impulse response

ANSI/AAMI SP 10-1992:
The blood pressure module complies with the American National Standard for Electronic or Automated Sphygmomanometers (AAMI/ANSI SP10-1992)

UL-2601-1:
Designed to meet UL-2601-1 Medical electrical equipment classified by Underwriter’s Laboratories, Inc. with respect to fire, shock and mechanical hazards in accordance with UL-2601-1

* Accuracy of given oxygen range is valid for only 68% of the data points taken and the remaining 32% of the data points are not counted in the specification.

** Paper operating environmental conditions are for a period of less than one month. Paper storage environmental conditions are for extended storage.

1 Water-tight transducers.

All product or brand names are trademarks or registered trademarks of their respective companies.

Warranty

One year warranty