

# F6 & F6 EXPRESS

Fetal & Maternal Monitor



Twins Monitoring Capabilities



10" High-Resolution Color LCD Screen



Maternal Monitoring (F6 Express)

The F6 series boasts high-end, hospital-grade monitors designed for multi-bed units equipped with a central station. While sophisticated enough for large hospitals, it remains user-friendly for private practices. It's carefully engineered design guarantees usability in dynamic situations, encompassing the full spectrum of antepartum and intrapartum applications.

## Features:

- 4 Hours of continuous battery life
- 24 hours waveforms playback
- Probe rack and wall mounting rack
- Signals Overlap Verification to differentiate twins FHR
- FHR signal quality indicator helps optimize the probe position
- Multi-crystal PW doppler waterproof transducer for FHR detection
- Optional built-in wireless module to connect to central nursing station

## What's the Difference?

### F6

*Basic Parameters:* FHR, TOCO, AFM, Fetal Movement  
*Internal Parameters:* IUP, DECG (Optional)

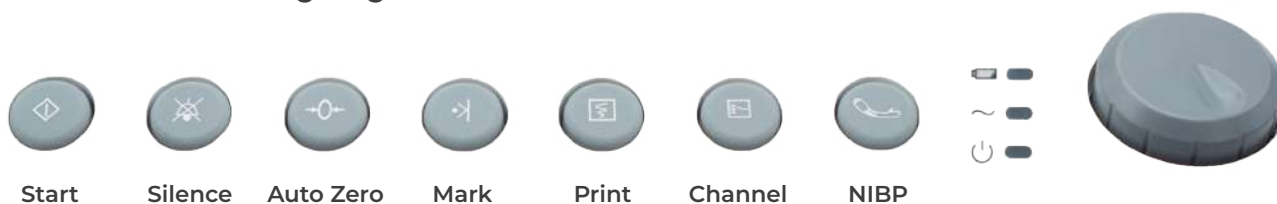
### F6 Express

In addition to the F6 parameters, the F6 Express will also include:

*Maternal Parameters:* ECG, HR/PR, NIBP, SpO2, TEMP



## User-friendly System:



Functional keys and knob provide various shortcuts to achieve functions for clinical use. The 'start' button could be configured to integrate patient info and printing. This could help the doctor to simplify the workflow and work with only one button.

## Easy to Read & Operate

- Numeric and waveform display of FHR and TOCO
- Simplified workflow with various short-cuts
- Easy to use menu system ensures fast access to important functions

## Powerful Data Management

- 60 hours built-in memory for seamless monitoring
- MFM-CNS network for remote monitoring
- CNS-Lite software for data management to PC

## Included Accessories

- FHR Probe, Qty 2 — **02.01.107705015**
- TOCO Probe (F6 without DECG and IUP function) (F6) — **02.01.210259**
- Fixed ECG Cable with 3 Lead Wires (F6 Express) — **01.57.471095-10**
- Adult Disposable Adhesive Electrodes (Snap Connector) (F6 Express) — **T716-50**
- Adult Reusable SpO2 Sensor (F6 Express) — **SHI.Lemo**
- Adult NIBP Cuff (F6 Express) — **Cuff.E9**
- NIBP Tube and Connector (F6 Express) — **01.59.036118-11**
- Temp Skin Probe (F6 Express) — **01.15.040187**
- Event Marker — **02.01.210095**
- Belt, Qty 3 — **933862**
- Recording Paper (90mm×152mm×150p, US Standard) — **Fetal-P**
- Power Cord (U.S.A. Standard) — **11.13.36016**
- Ground Cable — **11.13.114214**
- Rechargeable Lithium-ion Battery (4400mAh) — **21.21.064150**
- Ultrasound Gel (250g)
- Ethernet Cable

# Specifications

## PHYSICAL SPECIFICATION

Dimensions: 347 mm x 330 mm x 126 mm  
Weight:

F6: Approx. 5.3 kg  
F6 Express: Approx. 6.1 kg

## DISPLAY

10.1 inch  
Resolution: 800 x 480 Pixel  
Multicolor LCD

## POWER SUPPLY

Main Supply:

Operating Voltage: 100V ~ 240 V  
Operating Frequency: 50 Hz/60 Hz  
Input Power: 1.0 ~ 0.5 A

Rechargeable Li-ion Battery:

Nominal Voltage: 14.8 V  
Nominal Capacity: 5000 mAh  
Continuous Working Time >2 hr  
Necessary Charge Time <7 hr  
Cycle Life >300 times

## SIGNAL INTERFACE

RS232 Interface (DB9 or D-Sub)  
RJ45 Interface

## ULTRASOUND TRANSDUCER

8-Crystal Transducer  
Cable Length: 2.5m  
Weight: 190g  
Dimension: 88 mm x 35 mm  
Color Identification  
Color: Pink

## TOCO TRANSDUCER

Cable Length: 2.5m  
Weight: 180g  
Dimension: 88mm x 35mm

## RECORDING

Recorder: Thermal Dot Matrix Recorder  
Paper:

Z-fold, Thermosensitive  
(compatible with GE and  
PHILIPS recorder papers)

Paper Width: 152 mm /150mm

Effective Printing Width:

110 mm (American Standard)  
120 mm (International Standard)

FHR Printout Width:

70 mm (American Standard)  
80 mm (International Standard)

FHR Scaling:

30 bpm/cm (American Standard)  
20 bpm/cm (International Standard)

TOCO Printout Width: 40 mm

TOCO Scaling: 25%/cm

Printing Speed:

Standard Speed

(RealTime Traces) 1/2/3 cm/min

Fast Print Speed

(Stored Traces) Up to 15mm/sec

Accuracy of Data:

± 5% (X-Axis)

± 1% (Y-Axis)

Resolution: 8 dots/mm

## FHR

Operating Mode:

Ultrasound Pulse Doppler  
with autocorrelation

Working Frequency: (1.0±10%) MHz

FHR Measurement Range: 50 bpm ~ 240 bpm

Resolution: 1 bpm

Accuracy: ±2 bpm

Alarm: FHR Alarm

Temperature Rise:

When applied to the patient, the ultrasound  
transducer may warm slightly (less than 2°C (3.63.6°F) above ambient temperature). When

NOT applied, at the ambient temperature of  
40 °C 104.104°F), the ultrasound transducer

may reach the highest  
temperature of 43 °C 109.4109.4°F

Effective Radiating Area:

(942±15%) mm<sup>2</sup>

Dielectric Strength: 4000 Vrms

## TOCO

TOCO Range: 0-100

Non-linear Error: ±10%

Resolution: 1

Baseline Drift due to

Temperature Changes:

1 unit/min/°C (free air)

5 units/min/°C (underwater)

Zero Mode:

Automatic (TOCO value

becomes zero or below

lasting for 30 seconds)/

Manual

Dielectric Strength: 4000 Vrms

## DECG

DFHR Measurement Range:

30 bpm ~ 240 bpm

Resolution: 1 bpm

Accuracy: ±1 bpm

Alarm: DFHR Alarm

Input Impedance:

> 10 MΩ

(Differential, DC 50/60 Hz)

> 20MΩ (Common CMRR)

CMRR: > 110 dB

Noise: < 4 μVp

Skin Voltage Tolerance: ±500 mV

Fetal Input Voltage Current:

20 μVp ~ 3 mVp

## IUP

Pressure Range:

0 mmHg ~100 mmHg

(0.0 kPa~13.3 kPa)

Non-linear Error: ±3 mmHg(±0.4kPa)

Resolution: 1 mmHg (0.1 kPa)

Sensitivity: 5 μV/V/mmHg

Zero Mode: Manual

## MFM&AFM

Display Range: 0 ~ 999

FM Mode; Automatic/Manual

AFM Mode: Trace (default) / Black Mark

AMF Technique: Pulsed Doppler

Ultrasound

## MECG

MHR Measurement Range: 30~240 bpm

MHR Measuring Accuracy: ±2 bpm

Resolution: 1 bpm

MHR Alarm Limits: 30~240 bpm

Alarm: HR Alarm

Anti-electric Shock Type:

Defibrillating proof

Input Signal Range: ±8 mV PP

ECG Waveform:

Manual control ECG

waveform display

ECG falls off: Detect Automatically

Differential Input Impedance: >5 MΩ

Display Sensitivity:

2.5 mm/mV (X0.25), 5 mm/mV

(X0.5), 10mm/mV (X1),

20mm/mV (X2), AUTO gain

Electrode Offset Potential Tolerance:

±500 mV

Bandwidth (-3dB):

Diagnosis: 0.05 Hz ~ 150 Hz

Monitor: 0.5 Hz ~ 40 Hz

Response time to Change in MHR:

MHR range: 80 bpm ~ 120 bpm

Range: 7s ~ 8 s (average:7.5 s)

MHR range: 80 bpm ~ 40 bpm

Range : 7s ~ 8 s (average: 7.5 s)

Tall T-wave Rejection:

Exceeds ANSI/AAMI EC13

2002 Sect. 3.1.2.1 (C) maximum

recommended 1.2 mVT-wave amplitude

Sweep Speed: 25 mm/s 10%

## SPO2

Measurement Range: 50% ~ 100%

Resolution: 1 %

Measuring Accuracy(EDAN):

90 % ~ 100 % ± 2

70% ~ 90 % ± 4

<70% unspecified

Measuring Accuracy(Nellcor):

70% ~ 100% ± 2

<70% unspecified

Data update period (EDAN): 1s

Data update period (Nellcor): 2s

PR Measurement: Range: 30~240 bpm

Resolution: 1 bpm

Accuracy: ±3 bpm

SpO2 Alarm Limits: 50% ~ 100%

Alarm: PR Alarm and SpO2 Alarm

Wavelength:

Red light: (660±3) nm

Infrared light: (905±10) nm

Emitted light energy: < 15 mW

## NIBP

Measurement:

Systolic Pressure

Diastolic Pressure

Mean Artery Pressure

Method: Oscillometric Method

Measurement Range

Systolic Pressure:

40 mmHg ~ 270 mmHg (5.3 kPa~36.0 kPa)

Diastolic Pressure:

10 mmHg ~ 215 mmHg (1.3 kPa~28.7 kPa)

Mean Artery Pressure:

20 mmHg ~ 235 mmHg (2.7 kPa~31.3 kPa)

Resolution: 1 mmHg (0.1 kPa)

Measuring Accuracy:

Max. average deviation ≤ ±5mmHg (≤ ±0.8 kPa)

Max. standard deviation ≤ 8mmHg (≤1.2 kPa)

Measuring Time (Normal): 30~45 s

Measuring Time (MAX): 120 s

Alarm Limits:

Systolic Pressure:

40 mmHg ~ 270 mmHg (5.3 kPa~36.0 kPa)

Diastolic Pressure:

0 mmHg ~ 215 mmHg (1.3 kPa~28.7 kPa)

Mean Artery Pressure:

20 mmHg ~ 235 mmHg (2.7 kPa~31.3 kPa)

Alarm:

Systolic Pressure

Diastolic Pressure

Mean Artery Pressure Alarm

Software Over Voltage Protection:

(297 ± 3) mmHg [(39.6 ± 0.4) kPa]

Hardware Over Voltage Protection:

(320 ± 10) mmHg [(42.8 ± 1.3) kPa]

Cuff pressure measuring range:

0 mmHg ~ 300 mmHg(0.0kPa ~ 40.0kPa)

## TEMP

Channel: 1

Measurement Range: 0 °C ~ 50 °C

Resolution: 0.1 °C

Accuracy: ± 0.3 °C

(Transducer error excluded ± 0.10.1°C)

(Transducer ≤ ± 0.2 °C)

Unit: °C, °F

Refresh Time: 1 ~ 2s

Self Check: 5 ~ 10 min

Alarm Limits: 0.0 °C ~ 50.0 °C

Alarm: TEMP Alarm

Measuring Mode: Direct Mode

Position: Axilla

## Data transmission

Data Export: Ethernet/USB

Report Format: TRC

Data Management System: MFM-CNS

HIS connection: HL7/GDT