



**DF-10**  
**BIPHASIC DEFIBRILLATOR**



**DF-11**  
**BIPHASIC DEFIBRILLATOR**

**FEATURES:**

- 7" Colour Display with built in printer
- Charging time 6 sec on mains
- Offers variable energy level selection (2,3,5,10,20,30,50,70,100,150,200 Joules)

- Battery capacity 70-100 shocks on single charge
- Adult & pediatric paddles support
- Compact & Light weight
- Print out on 2" thermal paper
- Voice prompt facility

**OPTIONAL :**

AED, Pacer, SpO2, NIBP, EtCO2, Internal Paddle, 360 Joules

**TECHNICAL SPECIFICATION**

**GENERAL**

Display	: 7 Inch Colour TFT
Display Area	: 150 mm x 90 mm
Dimensions	: H 280 x W 330 x D 220 mm (Max) without Paddle
Weight	: Approx. 6 Kgs. Max.
Unit ON-OFF	: By front panel push button
Operation	: By front panel keyboard,Encoder
Alarm	: User adjustable high & low limit,Audible and visual alarming
Trend	: 24 hrs graphical and tabular trend of ECG,SpO2, NIBP,ETCO2
Charge / Discharge	: Charge and Shock buttons on front panel and Control paddles

**POWER SUPPLY**

Input	: 150-270 VAC, 50 Hz 10
Battery	: 12 V 4.5Ah, Rechargeable
Battery capacity	: 3 hours for monitor and 70-100 shocks on full charge
LED indicator	: Low battery and battery charging
Power consumption	: 30 Watts (max) in ECG mode

**ENVIRONMENTAL**

Operating Temp.	: +5°C to +5°C
Humidity	: up to 95% non-condensing

**Defib (External Paddles)**

Operating Mode	: Manual
Waveform	: Biphasic Truncated Exponential
Energy	: 2 to 200 joules in 12 steps selection
Energy display	: Displays selected and charged/delivered energy Energy delivery begins within 60 ms of the QRS Peak
Charging Time	: 6 seconds on Mains
Paddle Assembly	: External paddle assembly with coil retractable high voltage cable. Adults & Pediatric paddle integrated to same handle
Check Mode	: Manual check mode
Patient Impedance range	: 35 ohm to 250 ohm
Shock Delivery	: Through paddles or pads

**Defib (Internal Paddles) (Optional) Only in DF -11**

Operating Mode	: Manual
Waveform	: Biphasic Truncated Exponential
Energy	: 2 to 50 joules in 8 steps selection
Synchronous Cardio	: Energy delivery begins within 60 ms of the QRS Peak
Version	
Charging Time	: 6 seconds on Mains
Paddle Assembly	: Internal paddle assembly with paddle extension cord

**ECG**

Frequency response	: 0.5 Hz to 35 Hz
Patient isolation	: Optical isolation
Lead selection	: Lead I, II and III
Gain setting CMRR	: 0.5, 1.0 and 2.0
Sweep speed	: 12.5, 25.0, 50.0 mm/sec
Digital filter	: Digital signal processing for good quality of ECG
ECG traces viewing	: 4 seconds of ECG traces

**HEART RATE**

Range	: 10-250 BPM
Accuracy	: +/- 2 BPM
Resolution	: 1 BPM
Tone	: Beep on every QRS detected
Alarm limit setting	: 10-250 (step of 1)

**PRINTER**

Paper Type	: Thermal paper 50/55mm width, 20 meters length for 2 inch printer
Event Printing	: Prints 5 seconds pre & post ECG with Date, Time Energy and mode, Shock Status
ECG in Defib Mode	: Prints last 10 sec ECG through paddle
Print Annotates in	: Time, Date, Mode, lead name, gain, sweep speed Defib Mode
ECG in Monitor Mode	: Prints last 10 sec ECG through cable
Monitor Mode	: Print Annotates in Time, Date, selected lead name, Gain, Sweep speed

**SpO2 (Optional) Only in DF -11**

Systolic, Diastolic and Mean arterial pressure Range	: 0 - 100% Accuracy: 70 - 100% + 2 digits, 50 - 69% + 3 digits
Pulse rate	: Displayed in ECG window, when PR is selected
Pulse beep	: Yes, with volume control
PR range	: 10 to 250 bpm (+/-2bpm)
Pitch variation with change in oxygen saturation	

**NIBP (Optional) Only in DF -11**

Systolic, Diastolic and Mean arterial pressure Range	: 10-250mmHg
Method	: Oscillometric
NIBP interval	: User selectable - 2 min. to 25min.
Modes	: Manual, auto
Cuff deflation	: Automatic
Safety features	: Automatic deflation if cuff pressure exceeds 280mmHg
NIBP status display	: "Ready", when not taking reading as "Measuring", when taking reading and "Error", if reading could not be taken due to some error while measuring
Patient Type	: Adult, Pediatric, Neonate

**AED Mode (Optional) Only in DF -11**

Wave form	: Biphasic truncated exponential
AED shock series	: Energy level 200J Charge command: Automatic after identifying shockable rhythm
Shock Command	: Front panel button, shock
Controls	: Analyze
Defibrillation	: Self adhesive, adult pads
Electrode	
Voice and Text	: Extensive text and audible messages to guide user prompts

**PACER (Optional) Only in DF -11**

Wave form	: Monophasic
Modes	: Demand or Non Demand
Pulse Current	: From 10mA to 150 mA (resolution of 10 mA), 40 ms (+/- 1ms)
Pulse Duration	: From 20 ppm to 250 ppm (increments of 1 ppm)
Pacing rate	: 340ms (from 30 to 80 ppm); 240ms (from 90 to 180 ppm)
Refractory period	: 150 voltage
Maximum output	: 200 ohm to 1k ohm
Impedance range	

**EtCO2 (Optional) Only in DF -11**

Parameter	: EtCO2, RR
Adoptor	: Adult, Pediatric, Neonate
Measurement Mode	: Mainstream & side stream
EtCO2 Range	: 0-100mmHg
Accuracy	: +/- 2 mmHg
Respiration Range	: 0-120 bpm