



HKN-93 SERIES

INFANT RADIANT WARMER



Stock code [300314]



DAVID

Brief Introduction

- Three control Modes: Pre-warm Mode, Manual Mode and Baby Mode control by Micro-computer Control;
- Set Temperature and Baby Temperature can be displayed separately;
- Horizontal angle of warmer module and inclination of the bassinet can be adjusted;
- The panels surrounded bassinet can be turned outward or disassembled;
- X-ray cassette under the bassinet;
- Electric Leakage Prevention;
- Lockable Controller to avoid misoperation;
- RS232 connector for data output.

Specification

Power requirement:

AC220V-230V/50Hz or AC110-120V/50Hz, 700VA (HKN-93)

AC220V-230V/50Hz or AC110-120V/50Hz, 750VA (HKN-93B / 93A)

Control Mode: Pre-warm Mode, Manual Mode and Baby Mode are controlled by Micro-computer

Baby Mode temperature control range: 34.5°C-37.5°C

Skin temperature display range: 5°C-65°C

Accuracy of skin temperature sensor: $\pm 0.2^{\circ}\text{C}$

Temperature uniformity of mattress: $\leq 2^{\circ}\text{C}$

Angle of heater head: 0°, 30°, 60°, 90° for two ways

Inclination of the bassinet: $\pm 10^{\circ}$

APGAR timer: audible and visible alarm when the device runs to 1 min, 5 min, 10 min

Failure alarm: over temperature alarm, deviation alarm, sensor failure alarm, power failure alarm, setting alarm, checking alarm and so on.

The total irradiance Ebi on the effective surface area:

$\geq 0.66\text{mW}/\text{cm}^2$ (HKN-93B / 93A)

Average value of general bilirubin radiation on the mattress effective

range: $\geq 0.58\text{mW}/\text{cm}^2$ (HKN-93B / 93A)

Bilirubin uniformity of radiating on the mattress effective range:

> 0.4 (HKN-93B / 93A)

Dominant wavelength of blue light: 420-470nm

Features

- Heater Element 580w for Radiant Heating
- Micro-computer Control
- LED Observation Lamp
- Pre-Warm Mode: Heater starts with 100% then decrease to 30%
- Manual Mode: Selection of 10 steps from 0% - 100% with 10 steps display
- Baby Mode: Skin Servo Control can be set from 34.5 - 37.5 degree
- 10 Steps Heat Control
- Display LED 7 segments, units °C both setting and measuring temperatures
- Electrical Bassinet Tilting can be adjusted 10 degrees (Optional)
- 4 Transparent panels with 3 sides removable
- Electrical Height Adjustment from 84 - 99 cm (Optional)
- 4 lockable wheels
- Masimo SpO2 measures, Pulse rate, PI, FastSAT (Optional)

Optional Configuration

Disposable skin temperature sensor, Vertical height adjustment (VHA) stand, Weighing system and SpO2.

Standard Configuration

HKN-93:

Warmer module, bassinet, main column, mobile stand, controller, I.V. Pole and tray.

HKN-93B:

Based on HKN-93, plus the phototherapy unit.

HKN-93A:

Based on HKN-93B, plus the breath resuscitation bag, infant head fixing unit, the oxygen supplying set (the oxygen cylinders, buoy type oxygen regulator, wall type oxygen regulator), low-pressure suction.

Environmental Requirement

Operating range: 18°C-30°C

Ambient air velocity rate: < 0.3 m/s

Product Packaging

Package: The whole unit is packed into one carton

Dimension: 1270mm x 810mm x 1120mm

Gross Weight: 110kg(HKN-93)

120kg(HKN-93B)

142kg(HKN-93A)



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Multiple Failure alarm indications

APGAR timer



Three control modes:

Pre-warm mode control, manual mode control and baby mode control by micro-computer.

Set temperature and baby temperature are displayed separately

Acrylic Glass Panel

The panels around bassinet can be turned outward and flipped down.

X-ray cassette

X-ray cassette under the bassinet.

Hand-Wheel

The inclination of Infant Bassinet could be adjusted.

Warmer module could be rotated horizontally in both directions; The inclination angle could be adjusted.



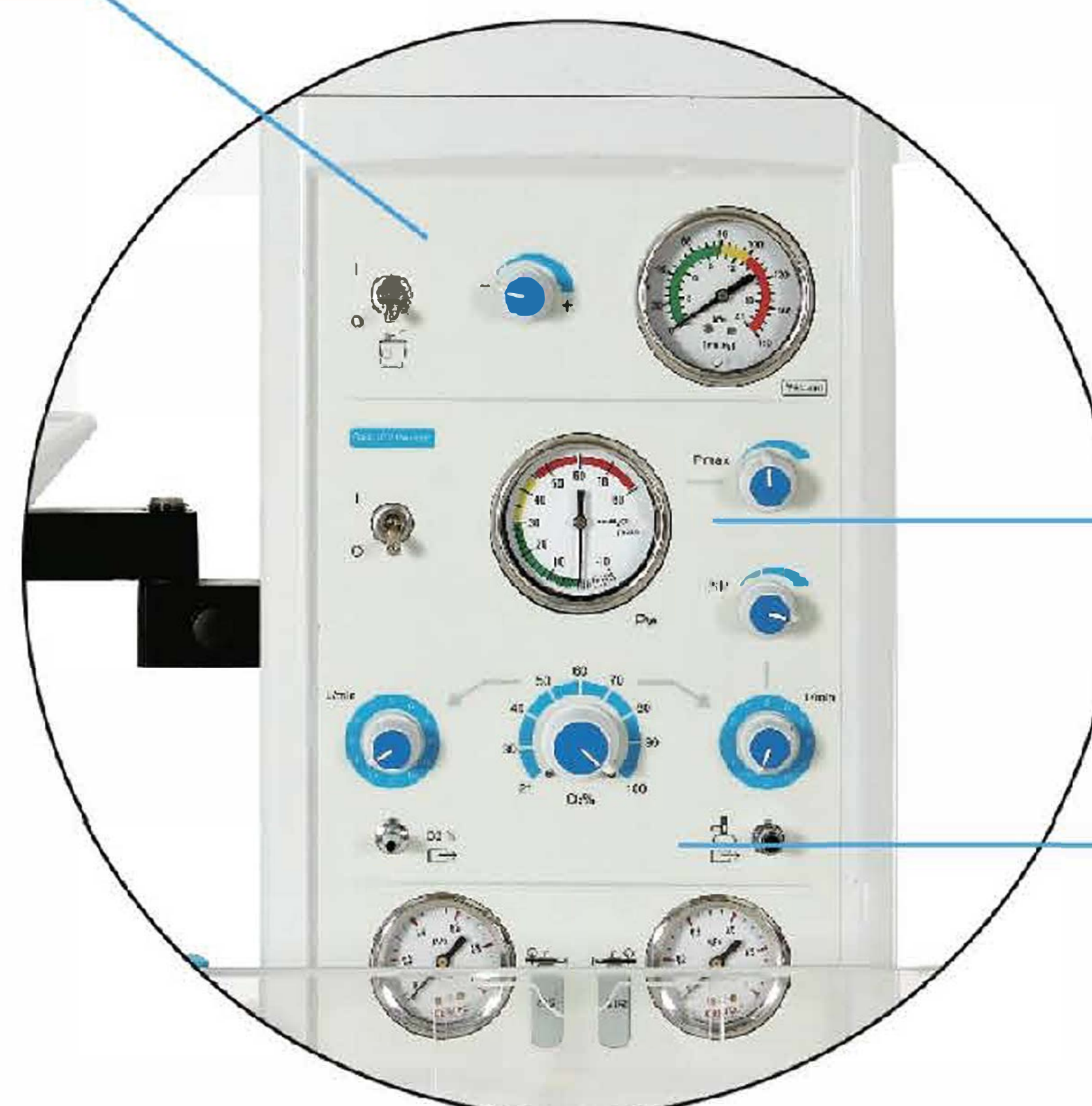
Suction Unit (Venturi)

Using Venn's pneumatic negative pressure suction device professional for the cleaning of newborn respiratory tract.



Skin Temperature Sensor

The accuracy of the skin temperature sensor is $\pm 0.2^{\circ}\text{C}$.



T-piece Resuscitator Unit

Provide effective and safe airway management during resuscitation; Offer a safety, stable and controllable target PIP and delivering consistent PEEP to help establish FRC and improve lung volume for the infant <10kg.

Air/oxygen blender

Provide and convey accurately controlled mixed air and oxygen gas to the patient in clinical use. The device is not only used as open-ended oxygen deliverer, but also important to offer flexibility to adapt to many medical devices.



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Specification

General Parameters

- Intended users: Infants with a body mass of up to 10Kg
- Operating environment requirements: temperature 18°C ~ 40°C, humidity: 5% ~ 95%
- Transport and storage environment requirements: temperature: -40°C ~ 60°C; humidity: up to 95%; atmospheric pressure 50 ~ 106kPa
- Protection against ingress of water: IPX4
- Total mass (including resuscitator and accessories): ≤ 6Kg
- Size (mm) : 290mm (W) × 180mm(D) × 370mm(H)

System parameter

- Gas supply: Medical oxygen and air (pipeline compressed gas supply system, or compressed gas cylinders)
- Gas supply input pressures range: 300 ~ 500kPa (About 45 ~ 75Psi)
- Gas source flowrate: ≥ 50L/min
- Alarm: Single gas source fault alarm
- Low-pressure hose assemblies for use with medical use pressures range: 0~1000kPa
- Low-pressure hose assemblies for use with medical use flow range: 160~500L/min

Air/oxygen mixing function

- Oxygen concentration setting range: 21% ~ 100%
- Accuracy: ≤ ± 3% V/V
- Reverse gas flow: Comply with the regulations of ISO11195:1995
- Flowrate setting range: 0 ~ 15L/min, the level settings respectively is 0,5, 1, 2, 3, 4, 5, 6, 8, 10, 12, 15 (L/min)
- Accuracy of flowrate output: ± 0,5L/min, @ 0,5, 1, 2, 3, 4 L/min;
± 1L/min, @ 5, 6, 8, 10 L ;
± 2L/min, @ 12 and 15 L /min

Vacuum suction function

- Vacuum setting knob setting range: 0 ~ 18.67 ± 1.33kPa (0 ~ 140 ± 10mmHg)
- Free air flowrate: < 20L/min (at the maximum vacuum setting)
- Vacuum response time: When the input gas source pressure is 500kPa, vacuum in 10 seconds should be at least 17.34kPa (130mmHg)
- Scale range of vacuum gauge: 0 ~ 21kPa (0 ~ 160mmHg)
- Vacuum gauge accuracy: ± 5% of full-scale value
- Gas wastage: < 28L/min (at the maximum vacuum setting)

T -piece resuscitation function

- Diaphragm manometer range: -10 ~ 80cmH₂O
- Manometer accuracy: ± 2% of full-scale value
- Dead space of resuscitator and airway accessories: up to 6ml
- Inspiratory resistance and expiratory resistance during the resuscitator function expiratory phase:
- During the expiratory phase, the pressure at the patient connection port shall not exceed 6cmH₂O below atmospheric pressure at an inspiratory airflow of 6L/min;
- The pressure at the patient connection port during the expiratory phase shall not exceed 6cmH₂O above atmospheric pressure at an expiratory airflow of 6L/min
- Maximum pressure (P_{max}) setting range: 1 ~ 60cmH₂O,
- The factory setting of the maximum pressure is 40 cm H₂O, can be adjustable.
- Peak Inspiratory Pressure (PIP) range at: 5L/min, approx. 1 ~ 57cmH₂O;
8L/min, approx. 2 ~ 58cmH₂O;
10L/min, approx. 3 ~ 59cmH₂O;
15L/min, approx. 5 ~ 60cmH₂O
- The factory setting of Peak Inspiratory Pressure (PIP) is 20 cm H₂O, can be adjustable.
- Positive End- expiratory Pressure (PEEP) range at: 5L/min, approx. 0 ~ 8cmH₂O;
8L/min, approx. 0,2 ~ 17cmH₂O;
10L/min, approx. 0,5 ~ 23cmH₂O;
15L/min, approx. 1 ~ 28cmH₂O