

INFANT INCUBATOR  
CHS-i1000 INFANT INCUBATOR MAMI i CHS-i1000 INFANT INCUBATOR

CHOONGWAE HOSPITAL EQUIPMENT SERIES

# INFANT CARE SYSTEM



**CHOONGWAE**  
MEDICAL CORPORATION





K040910



0434



Certificate No.2000-751-003



Certificate No.95-18



Certificate No.KRQ-0092



# Toward the world, for the health of mankind!

Intending to the greatest "MEDIPIA(Medical Utopia)" in the field of health & medicare for the human beings, Choongwae Medical Corporation has produced the excellent medical instruments and the state of the art medical equipments for 27 years based on the slogan which is "Toward the world, for the health of mankind..."

In order to make much more contribution to the progress of mankind's health industry and the advancement of medical welfare, Choogwae Medical Corporation is producing the newest Radiology Diagnostic System including many kinds of medical equipments and developing technical manufactures to provide medical benefits for patients under the Inferior environment.

"CHOONGWAE" is a reciprocal profitable enterprise for customers with the best Intention, giving the greatest satisfaction to them.

## INFANT CARE SYSTEM

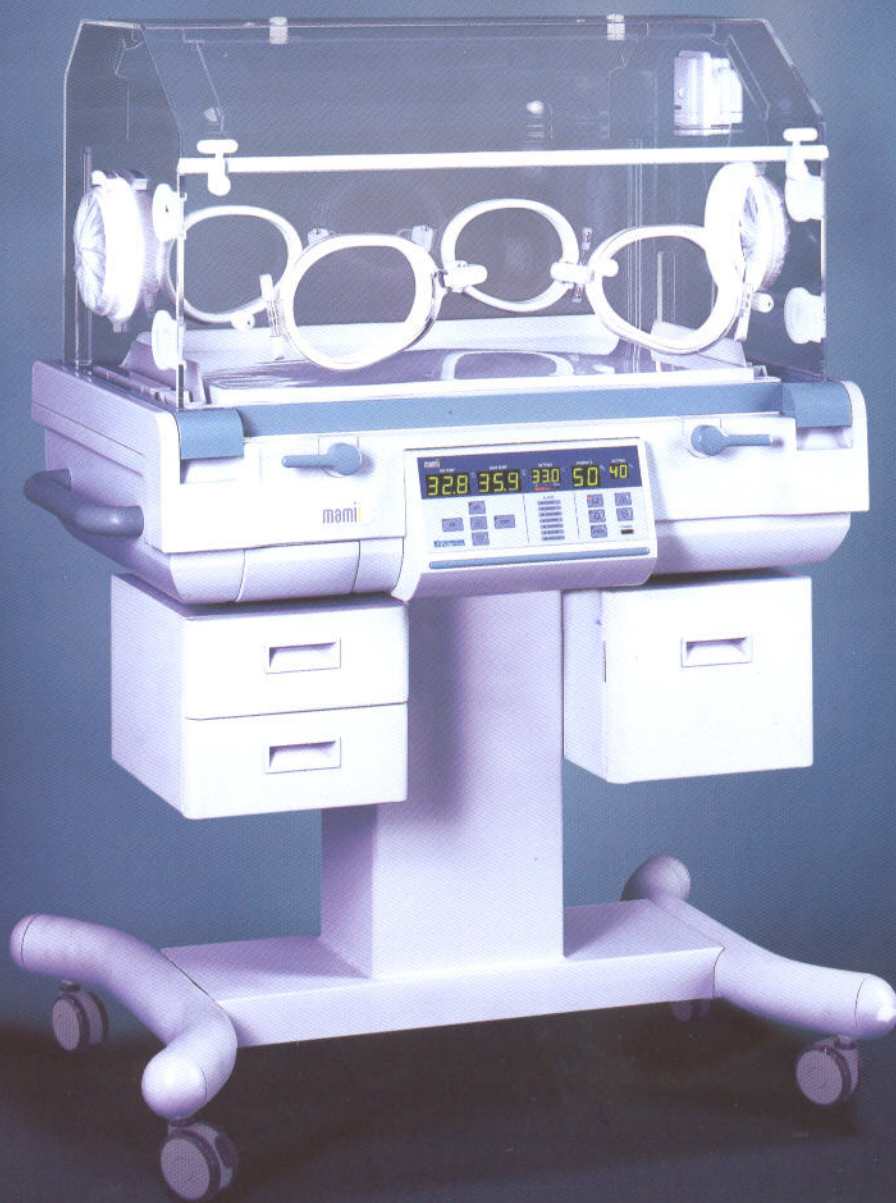
■ INFANT INCUBATOR	CHS-i1000
■ INFANT WARMER	CBW-1100
■ PHOTOTHERAPY UNIT	CHS-PU34

Infant Care Systems are manufactured in accordance with No.108 for the Approval of Medical Equipment Manufacturing by Ministry of Health & Welfare in Republic of Korea.

Infant Incubator acquired 「EM (Excellent of Machine) Mark」 from "National Industrial Technology Institute", and acquired 「ISO 9001, CMP Certificate」 from Korea Testing Laboratory, and 「CE mark」 from Det Norske Veritas.



# CHS-*i*1000 INFANT INCUBATOR







*The new CHS-i1000 Infant Incubator allows create optimal conditions through precise control of hood temperature and humidity by use of microprocessor. Double walls are also adopted to minimize radiant heat loss and such effect of external heat loss on infants.*

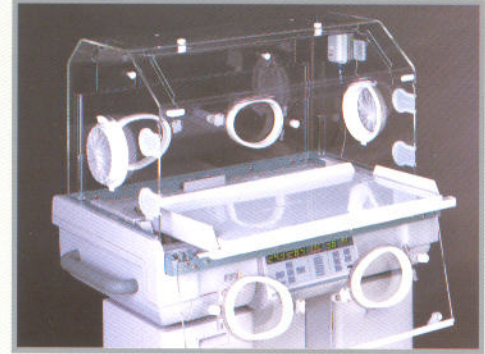
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By use of microprocessor, CHS-i1000 makes it possible to control temperature and humidity of the hood inside precisely. It is designed that air circulation system minimizes the heat loss in the hood by use of double wall structure and air wall(curtain). Humidity can be adjusted between 30~90% with a humidity controller. 8types of audible & visible alarm devices enable users to identify problems of the infant or Incubator easily, if the incubator has some trouble in its operation. Double safety device makes overheat of heater cannot affect the safety of the infant. In order to provide comfortable and silent environment for the infant, the noise level of the CHS-i1000 Infant Incubator is programed to lower than 47dB(A), which is lower than IEC601-2 standard.

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### Simultaneous Care for Multiple birth

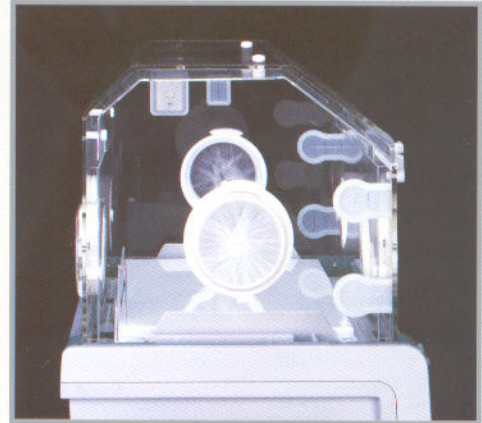
Multiple births have escalated over the years. Recent clinical studies observed the possibility of inhibited growth with premature twins suffering from separation trauma. The new CHS-i1000 from Choongwae allows you to simultaneously monitor your low birthweight twin infants in one incubator. A large mattress allows the clinician the sufficient spaces for caring both babies and provides enough room for both infants to grow comfortably.



# CHS-i1000 INFANT INCUBATOR

### Double Wall

Consistent air temperature is imperative to the development of a premature baby. The CHS-i1000 infant incubator adopts Double Wall Structure to minimize radiant heat loss from the newborn baby skin and maintain air temperature at constant level by flowing warm air between inner wall and outer wall during the operation. Inner wall is designed to be detached easily from the main hood for cleaning the inside of the hood and sterilization.



### Sensor Box

The controller module of the CHS-i1000 receives the data such as air temperature, skin temperature, humidity from the Sensor Box. These data are displayed on large LEDs of the control panel.

The connector and skin sensor is easily detached from the sensor box when cleaning or sterilizing the incubator hood.



### Air Wall(Curtain)

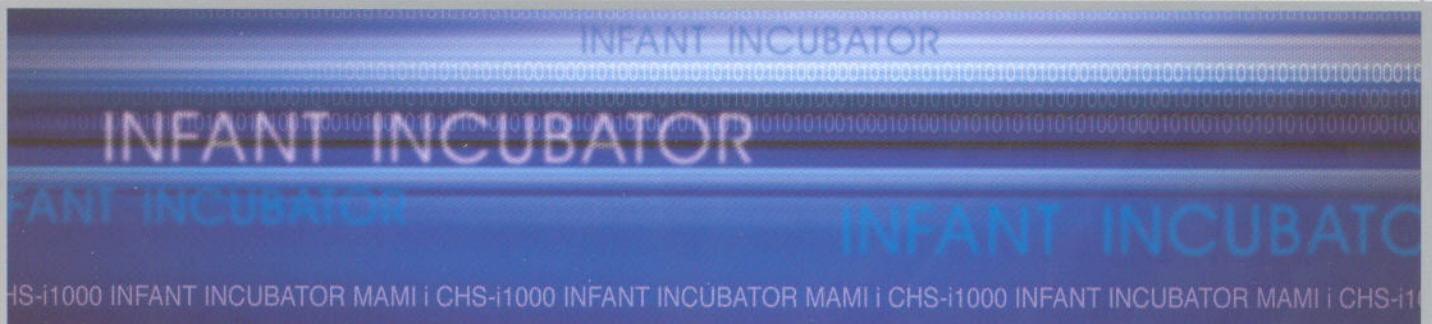
Air wall(Curtain) is incorporated into the new CHS-i1000 to help reduce temperature fluctuation within the incubator when the front door is opened for treatment of infant.



## Humidity Control and display

Humidity of the hood inside can be controlled until it reaches to the setting value and the range of the humidity control is between 30%~90%. The generated humidity is supplied to the hood by air circulation system. The measured value is displayed on the humidity display window.

The display range is between 30%~90% and if humidity is lower than 30% or higher than 90%, LL or HH is indicated on the humidity display window.



## Alarm function for safety

**Power Fail.** : When the power is off or disconnected accidentally.

**System Fail.** : When the system error occurs.

**Over Temp.** : When the air temp. is over maximum control range(37°C) by 1°C.

**Air Flow** : In case of non-operation of fan & motor.

**Sensor Fail.** : The sensors are disconnected or the wire of the sensors is broken.

**Air Temp.** : When the air temp. differ from setting temp. by over 1.5°C or lower 3°C

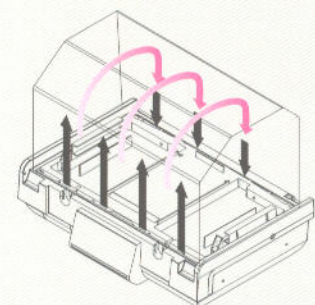
**Skin Temp.** : When the real skin temp. differ from setting temp. by over 1.0°C

**Low-Water** : When the level of humidification water is lower than limit on the humidity reservoir.

In every case, the Alarm lamp will be flash and audible alarm will also sound

## Air Circulation System

The new CHS-i1000 infant incubator adopts an Air Circulation System to maintain consistent air temperature and humidity in the hood and reduce radiant heat losses from the infant by flowing warm air between inner wall and outer wall with circular blower.



## Humidity Reservoir

The humidity reservoir is removable. It makes it easier to replace used water with fresh water and to clean the reservoir.



## CHS-i1000



The mattress can be in trendelenburg position. The tilting range is between 0°~12°



# CBW-1100 INFANT WARMER





*Cool comfortable lighting assures less fatigued eyes. Adjustable mobile stand designed for balanced stability & transporting. More effective phototherapy by 4pcs of fluorescent lamp.*



X-ray photography procedures have been simplified. Just swivel the canopy through an angle of 90° to either sides.



X-ray cassette tray conveniently placed enables you to take accurate X-ray.



The mattress platform can be tilted 0°-10° with respect to the horizontal plane. So that it gives ample space for instruments, tubing and patient leads.



Computerized control system integrates all necessary controls, indicators, displays and alarms in a single location

The CBW-1100 infant warmer is the system to offer you various patient care opportunities, incorporated computerized control and warming functions which expand capability for infant care management. You can precisely control the neonate's thermal environment to help prevent cold stress. And you can more easily work with your patient in chronic or intensive care situations in the operating room, delivery room or nursery. The built-in microprocessor precisely controls the temperature to help prevent cold stress from patient. The optimal environment for the patient is realized through servo control system which control the temperature between skin temperature and air temperature automatically. Tilting function (0° ~ 10°) allows better access to patient and patient management. Larger bed accommodates larger baby easily. The complete integrated multi-function computerized control panel enables that user can easily find out the trouble situation with his/her naked eyes through advanced alarm functions. The apgar timer gives audible and visual signal every 1 minute. So that user can easily check lapse-time of heating. If there is an error or malfunction, those surely be checked by self-diagnostic function, a series of diagnostic codes simplify troubleshooting and servicing.

#### Sophisticated computerized control system.

The CBW-1100 infant warmer control system uses an advanced microprocessor to put you in control of patient and system status while providing both manual and servo modes of operation to maintain precision thermoregulation. In addition to enhancing patient safety with a comprehensive alarm system, the micro-processor also reduces service time with a complete system self-check on power up, verification of accurate operation and calibration during use.

#### Computer-controlled warming

The powerful cal-rod heating element directs controlled radiant heat evenly across the entire bed surface, warming the baby but not the operator. The heater housing which also contains an exam light-swings out of the way 90° to either sides for special procedures, surgeries and X-rays whenever you need complete, unobstructed access to your patient. The apgar timer sounds every 1 min. showing lapse time of heating. All the transparent acryl baby guards but the one closest to the support pole may be pulled down out of the way to provide quick infant access. The mattress platform can be tilted 0°-10° with respect to the horizontal plane. So that it gives ample space for instruments, tubing and patient leads.

#### Alarm function for safety

The provided alarms are for power fail, sensor fail, High/Low temperature of skin & air and over temperature. When alarm conditions occur, an appropriate indicator lamp will flash and buzzer will sound. Further, if the skin temperature rises 1°C or more above the preset level, power supply to the heater will be automatically cut off to prevent further temperature rise.

### Specifications

Power source	220V/110V, 50/60Hz	Alarm function	Power fail.      System fail. Sensor fail.      Skin temp. Air temp.          Over temp.	Heater	Ceramic, infrared and radiant heating system Controlled by microprocessor Rotation of head part 90° to either side for X-ray
Power consumption	Heater : 650W Control box : 45W Halogen lamp : 50W Photo lamp : 20W × 2ea	Apgar timer	Range of display : 1~99min. Sounds every 1 minute.	Mattress	700 × 500mm
Skin temperature	Control temperature ranges : 35°C ~ 37.5°C Resolutions : 0.1°C	Dimension	500 × 700 × 1,770mm	Trendelenburg	0° ~ 10°
Air temperature	Control temperature ranges : 30°C ~ 38°C Resolutions : 0.1°C	Phototherapy lamp	20W × 2ea Equipped with electronic-stablizer life span : 2,000Hrs	X-ray cassette tray sized	10" × 12"
Display of temperature	Digital LED	Halogen lamp	Halogen lamp(50W × 1ea) : 3,000Lux Life span : 2,000Hrs.	Caster	4" × 4ea with brake
				Cabinet	Aesthetic design Giving space for storage



# CHS-PU34 PHOTOTHERAPY UNIT





Cool comfortable lighting assures less fatigued eyes. Adjustable mobile stand designed for balanced stability & transporting. More effective phototherapy by 4pcs of fluorescent lamp.



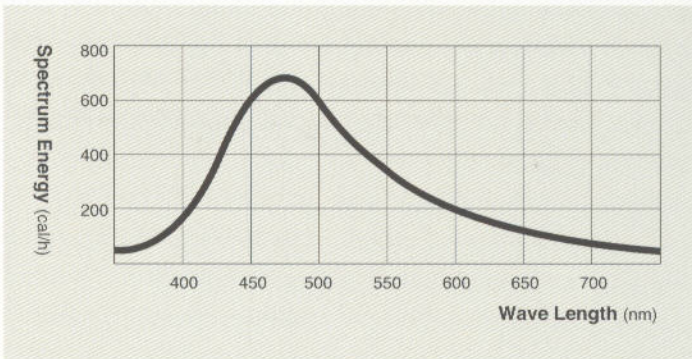
• With Incubator



• Tilting



• Up-down



FL. 20BW-NU Lamp × 4ea  
 Total Energy : 10,440cal/h  
 400-500nm Energy : 5,600 cal/h

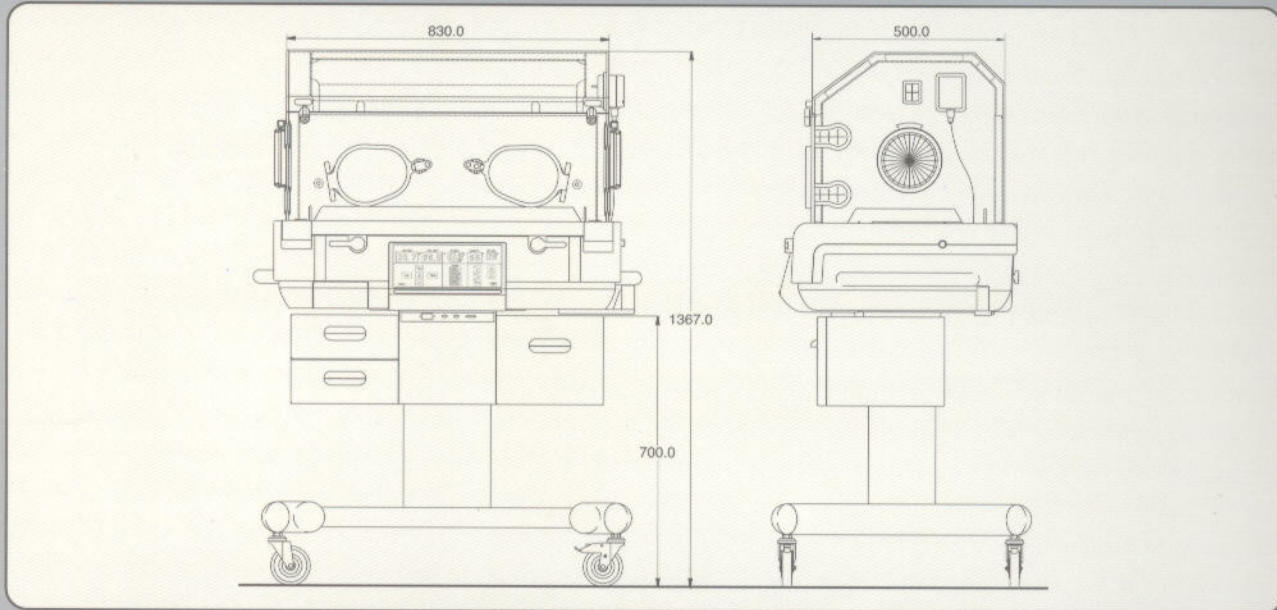
## Specifications

Dimensions	620mm(W) × 540mm(D) 500mm(W) × 565mm(D) 1,235mm ~ 1,785mm(H)
Lamp	Non Ultra-violet ray Lamp 4pcs
Power source	AC 220V/110V, 50/60Hz
Power consumption	90W
Hour meter	0 ~ 999Hr
Caster	2" Swivel Caster 4pcs
Housing tilt	± 45°
Net weight	25kg

**Standard Accessory** Eye mask(Large) : 1pc / Eye mask (Small) : 1pc / Curtain : 1pc



## ■ DIMENSION



## ■ SPECIFICATIONS

Power Source		220VAC, 50/60Hz or 110VAC, 50/60Hz
Power consumption	heater controller humidity	450W 60W 25W
Control mode		Air/Skin Mode
Warm-Up Time		≤25min.
Oxygen Concentration		21%-80%
Water Capacity		1000ml
Skin Temperature	Display Range Control Range	22°C ~ 45°C 35°C ~ 37°C with overrding switch to 38°C(option)
Air Temperature	Display Range Control Range	5°C ~ 50°C 20°C ~ 37°C with overrding switch to 39°C(option)
Humidity Control	Display Range Control Range	30% ~ 90% 30% ~ 90%
Dimension	Hood Cabinet Mattress	830(W)X480(H)X500(D) 945(W)X701(H)X634(D) 690(W)X369(D)mm
Mattress Tilting Angle		0 ~ 12°
Noise level in Hood		≤47 dB(A)
Fuse		AC 250V/4A or AC 125V/6.3A
Air Filter		0.5μm
Weight		Approx. 80kg
Hood System		Double Wall Type
Control type		Microprocessor
Alarms(L.E.D)		Power fail, System fail, Sensor fail, Over Temp. fail, Air flow fail, Air Temp. fail, Skin Temp. fail, Low-Water

## ■ ACCESSORY

STANDARD ACCESSORY	OPTION ACCESSORY
Filter : 1pc	I.V Pole : 1pc
Skin temp. probe : 1pc	
Fuse : 2pcs	
Dust cover : 1pc	

The specifications are subject to change without prior notice for improvement.



**CHOONGWAE**  
MEDICAL CORPORATION

서울특별시 금천구 가산동 345-30 (에이스 9차 3층)  
Tel. 02-2109-7877 Fax. 02-2109-7880

EXPORT

Tel. +82-2-2109-7874/7875 Fax. +82-2-2109-7880  
E-mail: export@cwm.co.kr