HW/M
The Future Health & Well-being
Healthwell Medical, Inc.

Global Leader in medical device industry that develops, manufactures and supplies plasma sterilizers, air disinfectors and portable CPR devices worldwide

Healthwell Medical

Healthwell Medical, Inc.

COMPANY PROFILE

Healthwell Medical, Inc. is a company specialized in research, development and manufacturing of medical devices and is a subsidiary of CU Medical Systems, a global leader in AED(Automated External Defibrillator). Our main products are Low Temperature Plasma Sterilizers, Air Disinfectors and Automated CPR devices which are manufactured under the slogan of "The Future Health & Well-being". In addition, we are the one and only company in Korea that manufactures bulletproof polycarbonate optical lenses.

COMPANY HISTORY

2012
Registered as manufacturing and sales business of medical devices
Licensed to manufacture X-CPR(Automated CRP device)

2013
Became a subsidiary of CU Medical Systems
Acquired the business division of Low Temperature Plasma Sterilizers

2014
Launched HPS-30, a new plasma sterilizer in cooperation with NFRI(National Fusion Research Institute)
Certified as "Family Enterprise of NFRI"
Launched PLAZE-50/70, a new line of plasma sterilizers
CE certified for X-CPR

2015
CE certified for HPS-30
Launched HPS-50/60/80/100
Launched Air Disinfectors

2016
More than 280 installations in infection control centers of Fire Stations throughout the country
Exports of Low Temperature Plasma Sterilizers to Europe, Middles East and Asia
CE certified for HPS-50/60/80/100

Contents

About Low Temperature Plasma Sterilizers

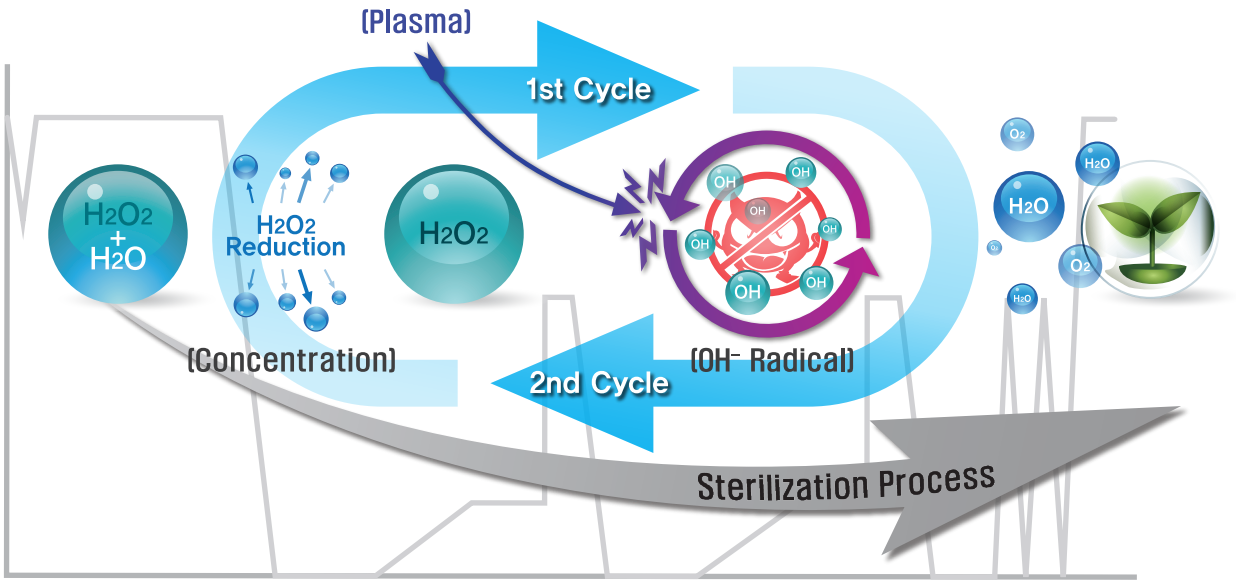
Plasma?

All Matter on the earth exist in 3 states; solid, liquid and gas. The other 4th state of matter is Plasma. If atom and molecules in gaseous state get a strong energy, electrons of atom are separated to ion state and electroneutral atom is being separated as particles with plus and minus polarity. This state is called plasma, the fourth state of matter.

Characteristics of Microwave Plasma

Microwave. It has a similar material property as light to have a strong directivity. It can go far with small power, has a wide width of frequency and has a strong sterilizing power. Since microwave plasma sterilizers can generate plasma at low temperature conditions, it can sterilize heat sensitive materials. Most of the plasma sterilizers adopt RF or DBD technology use the frequency of 3.56 MHz, however Healthwell Medical, Inc.(HWM)'s microwave plasma generate OH^- radicals by using 2,400 million waves of micro frequency of 2.4GHz.

Plasma Sterilization Process



Characteristics of plasma sterilizers

Why to use HWM's Low Temperature Plasma Sterilizers ?

Healthwell Medical, Inc.'s Low Temperature Plasma Sterilizers generate vacuum plasma inside the sterilization chamber to add Hydrogen Peroxide gas which will decompose into OH radical that is to kill microorganisms on the medical devices and instruments which are vulnerable to high temperature, high pressure and moisture.

After sterilization Hydrogen Peroxide(H_2O_2) only leaves water(H_2O) and oxygen(O_2) which are not harmful to environment inside the sterilization chamber, unlikely other sterilization technologies using harmful gases, a long process of removal of residual gas is not necessary and the instruments are ready to be used at once the sterilization process is completed.

Easy to operate and faster turn-around of medical instruments by a short sterilization cycle time

Instruments can be used right after sterilization without any additional gas removal process (5~7 cycles per day)

Prevention of deformation and damage of instruments

While RF type plasma adopted by a number of companies has a risk of damage to precise instruments with electronic circuits due to its typical generation of arc discharge, HWM's MRP(Microwave Remote Plasma) type plasma basically eliminated the possibility to damage metallic instruments which are vulnerable to heat and moisture.

Thorough sterilization uniformly through the chamber

Highly efficient Microwave Plasma disperses the sterilant uniformly inside the sterilization chamber to maximize stability and credibility of sterilization process.

Low running costs

Competitive acquisition cost compared to RF type sterilizers
Low running costs due to small amount of Hydrogen Peroxide per cycle
Plug & Play to commercial power benefits no installation cost of additional facilities

Environment-friendly Sterilization Method

Hydrogen Peroxide, the sterilant is decomposed to water and oxygen which are not harmful to environment by plasma after sterilization and therefore does not have potential danger to staffs and patients.

Device that can be sterilized

The Objects to be sterilized

You can choose from 3 different sterilization modes(Smart Mode, Standard Mode, Special Mode) according to medical instruments or item that you want to sterilize.

SMART MODE
(Non Lumen Cycle)

To sterilize a small load of instruments in a short time.
Surface sterilization of pincette, cutter and other plastic instruments.

Surgical Scissors | Stainless Explorer | Pincette | Cutter

STANDARD MODE
(Flexible Cycle)

To sterilize a medium load(about 65% of the chamber capacity) of instruments.
Drill tip, handpieces, other normal surgical instruments.

Handpiece | Drill tip | TUR Set | Defibrillator paddles

SPECIAL MODE
(Lumen Cycle)

To sterilize a large load(about 80% of the chamber capacity) of instruments.
Hollow loads which requires internal sterilization, Instruments made of thick and heavy metal, instruments which requires precise sterilization.

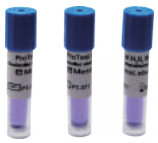
Non-lumened Endoscope | Drill | Teflon Lumen device HPS-30,50 (1∅×1,000mm(L)) | Teflon Lumen device HPS-100 Series (1∅×1,500mm(L))

Consumables & Options

Consumables

HWM provides high quality consumables to be used with its products at economical price.

◀ **Hydrogen Peroxide cartridges (1 cartridge per 1 cycle)**
- Yellow Label(4cc) : HPS-30, HPS-50
- Blue Label(6cc) : HPS-60, HPS-80, HPS-100



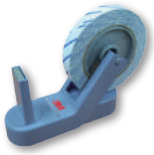
◀ **Biologocal Indicators**
- Incubation time and Temperature : 24 hours, 60 ℃
- 100EA/BOX

◀ **Chemical Indicator Strip**
- 1 Pack/250 Strips

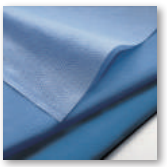
◀ **Chemical Indicator Tape**
- 20 Rolls/Box

◀ **Tyvek pouches**

Tyvek Film Rolls gr/㎡	
ST675	Tyvek 75mm × 100mts
ST610	Tyvek 100mm × 100mts
ST615	Tyvek 150mm × 100mts
ST620	Tyvek 200mm × 100mts
ST625	Tyvek 250mm × 100mts
ST630	Tyvek 300mm × 100mts
ST640	Tyvek 400mm × 100mts



◀ **Chemical Indicator Tape & Cutter**



◀ **Exclusive non-woven sheet for plasma sterilizers**

◀ **Incubator**

◀ **Professional Label Gun**

Options

(Practical Application)

◀ **Exclusive Carts for HPS-30, HPS-50**
- HPS-30 : 613mm(W)×665mm(H)×850mm(D)
- HPS-50 : 613mm(W)×880mm(H)×850mm(D)

HPS – 30

A small 30L countertop sterilizer

Recommended for Small Clinics including Dental Clinics, Veterinary Clinics and Fire Stations.
Compact design maximizing easy to use and user convenience
Countertop(exclusive cart option)

1. Easy to use

You can start/cancel/control the sterilization process by simply pushing key buttons. The selected sterilization cycle will be progressed automatically and you can monitor relevant information such as sterilization conditions, progress status, error messages from the display.

2. Automatic notification system for regular maintenance

Your HPS series sterilizer will automatically notify you the replacement period of consumables such as pump oil, air filter and so on. After 250 cycles of sterilization, a warning message to change oil will be displayed and your sterilizer will stop working when reaches 300 cycles without change of oil to prevent equipment failure.

30Liter
Chamber

Specifications

Sterilizing Agent		Hydrogen Peroxide, 1Cycle/Cartridge
Total Cycle Time	Smart Mode	40min
	Standard Mode	48min
	Special Mode	56min
Cycle Temperature		45℃ ~ 60℃
SAL(Sterility Assurance Level)		10^{-6} (Bacillus)
By–products		Oxygen and vapor water only
Chamber	Shape	Rectangular
	Material	Aluminum
	Volume	Total : 30L
Dimensions	Overall	594mm(W)×525mm(H)×605mm(D)
	Chamber	340mm(W)×240mm(H)×395mm(D)
Weight		90kg
Control		32bit Micro Processor
Cycle Information		2.7" (OLED) Display, Printer
Electrical		AC 220V, 50/60Hz, Max 2.7kw
Installation Requirements		Front : 100cm Rear, Left side, Right side : 5cm Placement :Built–in wheels provide mobility(Option Cart)
Room Conditions		Use Environment : 10 ~ 40 ℃, 30 ~ 75 %RH Installation Environment : –20 ~ 60 ℃, 0 ~ 95 %RH
Printer		Built–in Thermal Printer(Brief Mode / Detail Mode) Cycle Parameters(Temp, Pressure, Time, Daily&Total Cycle, etc)
Cart(Option)		613mm(W)×665mm(H)×850mm(D)

HPS－50

A 50L countertop sterilizer

Recommended for Small & Medium Medical Hospitals, Fire Stations, Community Healthcare Centers, Military Hospitals.
Long surgical instruments can be sterilized thanks to the 660mm deep sterilization chamber.
Compact design maximizing easy to use and user convenience, Countertop.(exclusive cart option)

3. Self Test Features

When malfunction occurs during operation, an error code is displayed by self-test features and the running sterilization cycle is interrupted automatically for safety.

4. Validation of Sterilization of HPS－30, 50

A PCD(Process Challenge Device) in accordance with EU standards(EN 867-5) is used for the validation of sterilization of a dead-end lumen at the most difficult positions inside of the sterilization load.

Test Mode	Lumen Size
Special Mode(Lumen Mode)	HPS–30,50 (1 Ø × 1,000mm(L), Teflon)

50Liter Chamber

Specifications

Sterilizing Agent		Hydrogen Peroxide, 1Cycle/Cartridge
Total Cycle Time	Smart Mode	40min
	Standard Mode	48min
	Special Mode	56min
Cycle Temperature		45℃ ~ 60℃
SAL(Sterility Assurance Level)		10^{-6} (Bacillus)
By–products		Oxygen and vapor water only
Chamber	Shape	Rectangular
	Material	Aluminum
	Volume	Total : 50L
Dimensions	Overall	594mm(W)×525mm(H)×890mm(D)
	Chamber	338mm(W)×236mm(H)×660mm(D)
Weight		110kg
Control		32bit Micro Processor
Cycle Information		2.7" (OLED) Display, Printer
Electrical		AC 220V, 50/60Hz, Max 3.0kw
Installation Requirements		Front : 100cm Rear, Left side, Right side : 5cm Placement :Built－in wheels provide mobility(Option Cart)
Room Conditions		Use Environment : 10 ~ 40 ℃, 30 ~ 75 %RH Installation Environment : －20 ~ 60 ℃, 0 ~ 95 %RH
Printer		Built－in Thermal Printer(Brief Mode / Detail Mode) Cycle Parameters(Temp, Pressure, Time, Daily&Total Cycle, etc)
Cart(Option)		613mm(W)×880mm(H)×850mm(D)

HPS－60 / HPS－80 / HPS－100

Medium & Large 60/80/100L sterilizers

Recommended for Small & Medium Medical Hospitals, Community Healthcare Centers, Military Hospitals . Long and big surgical instruments can be sterilized.

1. Easy to install

Simply plug into a standard 220v outlet and your HPS series sterilizers are ready to go. You won't need additional facilities such as compressed air, drainage system, ventilation system.

2. Easy to use

You can start/cancel/control the sterilization process by simply pushing key buttons. The selected sterilization cycle will be progressed automatically and you can monitor relevant information such as sterilization conditions, progress status, error messages from the display.

3. Self-test features

When malfunction occurs during operation, an error code is displayed by self-test feature and the running sterilization cycle is interrupted automatically for safety.

4. Automatic notification system for regular maintenance

Your HPS series sterilizer will automatically notify you the replacement period of consumables such as pump oil, air filter and so on. After 250 cycles of sterilization, a warning message to change oil will be displayed and your sterilizer will stop working when reaches 300 cycles without change of oil to prevent equipment failure.

Specifications

Model		HPS－60	HPS－80	HPS－100
Sterilizing Agent		Hydrogen Peroxide, 1Cycle/Cartridge		
Total Cycle Time	Smart Mode	40min		
	Standard Mode	48min		
	Special Mode	56min		
Cycle Temperature		45℃ ~ 60℃		
SAL(Sterility Assurance Level)		10^{-6} (Bacillus)		
By-products		Oxygen and vapor water only		
Chamber	Shape	Rectangular		
	Material	Aluminum		
	Volume	Total : 60L	Total : 80L	Total : 100L
Dimensions	Overall	700mm(W)×1610mm(H)×954mm(D)		
	Chamber	320mm(W)×278mm(H)×750mm(D)	400mm(W)×278mm(H)×750mm(D)	400mm(W)×358mm(H)×750mm(D)
Weight		170kg	175kg	180kg
Control		32bit Micro Processor		
Cycle Information		2.7" (OLED) Display, Printer		
Electrical		AC 220V, 50/60Hz, Max 3.4kw		
Installation Requirements		Front : 100cm Rear, Left side, Right side : 5cm Placement :Built－in wheels provide mobility		
Room Conditions		Use Environment : 10 ~ 40 ℃, 30 ~ 75 %RH Installation Environment : －20 ~ 60 ℃, 0 ~ 95 %RH		
Printer		Built－in Thermal Printer(Brief Mode / Detail Mode) Cycle Parameters(Temp, Pressure, Time, Daily&Total Cycle, etc)		

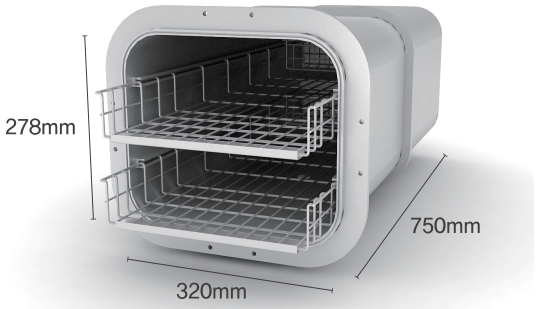
HPS－100 Series

▶ Validation of Sterilization of HPS－100 Series

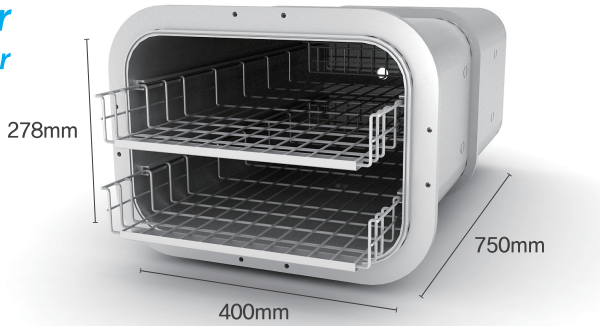
A PCD(Process Challenge Device) in accordance with EU standards(EN 867-5) is used for the validation of sterilization of HPS-100 series sterilizers at the most difficult positions inside of the sterilization load so that the most challenging medical instruments including dead-end lumens can be sterilized efficiently and effectively.

Test Mode	Lumen Size
Special Mode(Lumen Mode)	HPS–60,80,100 (1Ø×1,500mm(L), Teflon)

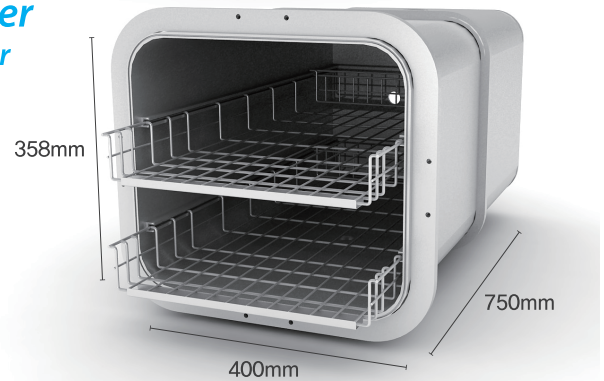
60Liter Chamber



80Liter Chamber



100Liter Chamber



HPA－85S

Floor Standing Air Disinfector

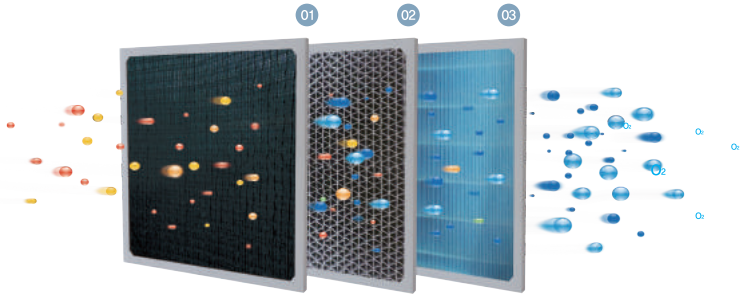
An innovative product that can disinfect room air in ORs, ICUs, hospitals and community healthcare centers to eliminate secondary infection sources and pollutants using UV photocatalyst, nano silver, negative ion and plasma technology.

1. Designed for convenient installation and mobility

2. Enhanced safety of disinfection with a built-in human-detecting sensor

3. Air purification system of plasma air disinfector

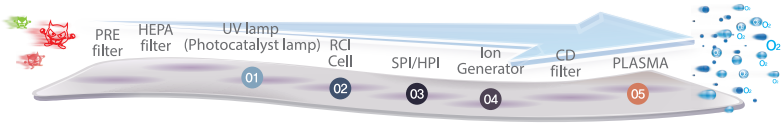
STEP1 (three stage air purification)



- 01 **Washable pre-filter** (large particles, hair, dust)
- 02 **CD filter_deodorizing effects higher than 90%** (tobacco smoke, bathroom odor, food smell)
- 03 **HEPA filter** (fine dust, yellow dust, fungus, Colon bacillus)

STEP2 (disinfection and deodorization)

– **Disinfection and deodorization effects by thorough verifications and experiments**



- 01 **UV disinfection** (disinfection of pathogen and microorganism)
- 02 **Decomposition of organic compounds to water and oxygen** (odor, germ, pathogen, virus)
- 03 **Removal of microorganism** (killing germs and emission of gas to eliminate indoor pollution sources)
- 04 **Generation of 3 million ions per second** (reducing symptoms of disease and improving immunity)
- 05 **Suppressing propagation of virus and fungus using plasma discharge**

Specifications

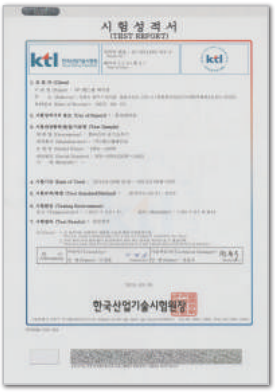
Dimensions	500mm(W) × 850mm(H) × 210mm(D)
Rated Voltage	AC 220－240V~, 50/60Hz
UV Lamp	UV-C /2ea less than 18W (hours of use : 8,000hr)
Photocatalyst Lamp	UV-A /1ea less than 15W (hours of use : 8,000hr)
Filter	Triple filters (PP pre filter, HEPA filter, CD filter)
Disinfection Method	Plasma, Negative Ion
Operation Noise	Less than 40dB
Low Noise	High-powered, Low noise Fan
Voice Output	Notification of operation mode by voice output
Safety Features	Ozone Sensor, Voice Function, Automatic Filter Replacement, Human-detecting Sensor

HPA－130W

Wall Mount (Ceiling Built-in) Air Disinfector

With its simple and elegant design for enhanced space utilization, it can perfectly fit in ORs, doctor's office, ICUs, community healthcare centers, schools and other public institutions.
Installation can be either wall-mounted or built-in.

4. Product Performance



HWM's

plasma air disinfectors are distinguished from other products in performance and technology. It sucks room air to kill germs as well as sprays plasma energy for surface disinfection of every corner in the room, ultimately to eliminate harmful bacteria.

Kills 99.9% of airborne germs

(Temp. 23±2℃, Humid. 50±5% R.H., 60㎥, 1 hour)

5. Characteristics

* Voice Function : voice support for each operation mode
* Maximizing space efficiency
* Adoption of photocatalyst, TiO2, negative ion which are very antiseptic
* Enhanced safety thanks to the built-in human-detecting sensor using low temperature plasma
* Automatic filter replacement : a warning message to replace filter will be displayed after certain period of time (optimal replacement period can be set according to environment)
* Ozone sensor : To keep ozone concentration under the permissible level at all times during disinfection process

Specifications

Dimensions	1300mm(W) × 325mm(H) × 135mm(D)
Rated Voltage	AC 220－240V~, 50/60Hz
UV Lamp	UV-C /2ea less than 18W (hours of use : 8,000hr)
Photocatalyst Lamp	UV-A /1ea less than 15W (hours of use : 8,000hr)
Filter	Triple filters (PP pre filter, HEPA filter, CD filter)
Disinfection Method	Plasma, Negative Ion
Operation Noise	Less than 40dB
Low Noise	High-powered, Low noise Fan
Voice Output	Notification of operation mode by voice output
Safety Features	Ozone Sensor, Voice Function, Automatic Filter Replacement, Human-detecting Sensor

OKC－119SP

Super Plasma Ambulance Disinfector

A disinfecting and deodorizing device to prevent secondary infections of rescue workers and patients in an ambulance

1. Real-Time monitoring of internal conditions by measuring temperature and humidity

2. Monitoring of progress status through a LCD window

Verification of information including plasma, negative ion, disinfection, temperature, humidity as well as replacement period

3. Verification of operation time and total operation time

4. Adjustment of negative ion, plasma, lamp and air volume with a remote control

5. Disinfection Mode

Basic Mode : OH radical plasma(RIC) and super plasma(SPI) disinfection mode
Selection Mode : fumigation mode(if necessary, additional operation is available. Activated by a human-detecting sensor)

Installation

6. Product Details

* **Specifications**

Disinfection(removal of microorganisms) module : super plasma(SPI) disinfection and OH radical plasma(RCI CELL) disinfection
Fumigation mode : less than 16W
Product Life : plasma lamp_more than 25,000hrs
super plasma_semipermanent

Demensions	360mm(W) × 220mm(H) × 85mm(D)
Weight	Less than 5kg (a removable & rechargeable battery included)
Battery	DC 12V (internal power) and AC 220V (equipped with an adapter)

X－CPR

A Portable CPR Device

A life saving, Automated CPR device that is using Simultaneous Sterno Thoracic CPR(SST-CPR) technology.

CE

1. **Performs chest compression and tightening thorax at the same time**
   (increased blood flow compared to normal CPR)
2. **Composed of a chest compression device with a compression strap operated by oxygen pressure**
3. **Designed to be mounted on a stretcher for continuous CPR while patients are being transported**
4. **Adjustment of compression depth and respiration volume according to patient's body shape**
5. **4 Easy steps**

Components

▶Main Unit ▶CPR mask set
▶Regulator ▶Charger ▶CPR hose ▶Air tank

Specifications

Pressure	
Input Oxygen Pressure	5.5 ~ 6.3kgf/㎠
Relief Valve Operation Pressure	9 kgf/㎠
Medical grade hyperbaric Oxygen	
Compression	
Compression Rate	100 times / min.
Compression Depth	0 ~ 5cm
Compression Modes	30 : 2
CPR	
CPR Volume	240 ~ 700 ml
CPR Time	1.0 sec.
Exterior	
Demensions	450mm(W) × 520mm(L) × 75mm(H)
Weight	11.5kg

The Future Health & Well-being

Healthwell Medical, Inc.

Headquarters/First Plant 130-2, Donghwagongdan-ro, Munmak-eup, Wonju-si, Gangwon-do, Korea
Tel. +82-33-732-0795 / **F**ax. +82-33-732-0796

Second Plant 101-2, Donghwagongdan-ro, Munmak-eup, Wonju-si, Gangwon-do, Korea
Tel. +82-33-735-1001 / **F**ax. +82-33-813-1103

Sales Office 221, Anyangpangyo-ro, Uiwang-si, Gyeonggi-do, Korea
Tel. +82-31-421-9700 / **F**ax. +82-31-421-9911