

# CV-Rescue<sup>®</sup> Water Purification System for Emergency Preparedness

## Basic Manual



What will you do during water outage due to disasters?



*Crystal Valley<sup>®</sup>*

"Crystal Valley Water Purification System" changes bath water, rain water, pool water, river water or sea water into safe potable water.

The highest level in the world

harmful substance removal ratio is 99% or more. 0.0001 micron reverse osmosis membrane used.

# Suitcase type Disaster Response Water Purification System

Voluntary organizations for disaster prevention, condominiums block association boards, residents' associations, offices, evacuation areas, etc.

Superior portability and virtually any power source can be used.

## Water Treatment Capability



Household wall outlet or generators



Battery and



Chlorine concentration of 0.2 mg/L or more is set forth in Water Supply Act. Check with the enclosed Pack Test.

Maximum water generating volume  
**51 L/hour**  
when using rain water  
**400 persons/day**

- Maximum water generating volume: TDS, 100ppm assuming a water temperature of 25°C (77°F)
- TDS: Total dissolved solids, similar level as salinity concentration

## CVR-T41J Suitcase type Disaster Response Water Purification System

[Specifications]

Size: W 465 X D 290 X H 665 (mm)  
Weight: Approx. 25 kg (including filters when dried)  
Maximum water generating volume: 1,224L/day  
Raw Water Temperature: 6 ~ 43 °C (42.8°F ~ 109.4°F)  
Source of Electricity: AC 100V 50/60 Hz DC 12V  
(When using the battery)  
Power Consumption: Approx. 85W

### AC 100V DC12V: a cigarette lighter socket is usable.

An inverter is used for DC 12V cigarette lighter. Because it features a safety circuit on the power source, the device automatically shuts off during power surges or fluctuations, and is reset by one touch button.

[Enclosed accessories: DC 12V Cigar Lighter Plug Inverter, Cigar Lighter Plug Alligator Clip Attachment]



### High-shock Resistant ABS Resin Body

High-shock resistant body protects important equipment in the severe conditions that accompany disasters, as well as cargo transport to isolated disaster-stricken areas by helicopter.

Designed to be fail-safe, even when dropped on accident, or bumped against something or other impacts.



### Multiple units can be stacked together - the unit is designed to prevent the collapse of cargo piles during transportation.

Transportation of multiple units is possible depending on the population and status in disaster-stricken area.

Limited space can be used effectively as it's possible to pile up the device.



### Roll Away

The case is equipped with casters, and can be easily moved by rolling it away with enclosed belt attached.



### Hand-Held

Vertical and horizontal handles are attached, so the unit can be carried, even over rough surfaces.



### Shoulder

Carry it over shoulder with enclosed belt attached.



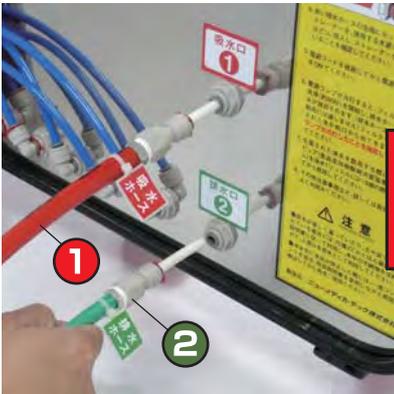
### Hang

It's possible to hang using the handles, which can easily withstand the load.

# Water purification system is housed in a suitcase. Shock-resistant, superior transportability and easy operation.

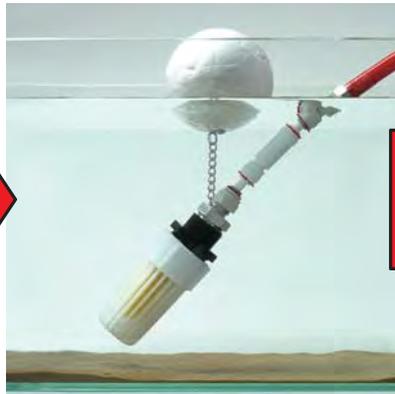
## Operation Procedures

It's easy to operate and usable under unfavorable conditions with AC/DC power supply.



### Connect enclosed suction and discharge hoses

Insert suction hose into (1) (red) and discharge hose into (2) (green) fully respectively.



### Put strainer in raw water.

Siphon the raw water from the upper part of the receptacle using enclosed float ball.



### Plug it in, turn it on.

Three kinds of power sources, AC 100V, DC 12V and cigarette lighter can be used.

\*Inverter is used for DC 12V/Cigarette Lighter.



### Put 2 drops of chlorine as disinfectant per 10 liters of purified water.

Free residual chlorine whose concentration is 0.2 mg/L or more is required for potable water under Water Supply Act.



### Attach the faucet of water purifier to antibacterial tank for potable water.

Verify whether green lamp indicating it's drinkable lights up.



### Water purification process will begin after system is checked and filter is cleaned.

When blue lamp indicating water is purified lights up, potable water comes out of a faucet.



### Safe and palatable water is readily available even during water outage.

Be sure to check the concentration before drinking using Chlorine Checker (Pack Test).

### Supplementary Instructions

**Chlorine Concentration Check**

Free residual chlorine concentration of 0.2 mg/L or more is set forth in Water Supply Act. Please check using the enclosed Chlorine Checker (Pack Test).

**Precipitate muddy water using turbid water flocculants.**

If raw water is turbid, stir it using a flocculating rabble. After a while, muddy water precipitates, and clear supernatant appears in upper portion. Please purify the clear supernatant.

# Motor Type Disaster Response Purification System

evacuation areas, public facilities, remote islands, commercial buildings, condominiums, etc.

Sea water becomes potable water with low power consumption of 660W.

## Water Treatment Capability



Household wall outlet or generators

Battery (inverter used sold separately)



## CVR-M155J

Monitor for safe potable water enclosed.

Maximum water generating volume

**156 L/hour**

In case of fresh water

**1248 persons/day**

Maximum water generating volume

**54 L/hour**

In case of sea water

**432 persons/day**

- Maximum water generating volume: TDS, 100 ppm in case of water temperature, 25°C (77°F)
- TDS: Total dissolved solids, similar level as salinity concentration

## Motor Type Disaster Response Purification System

[Specifications]

Size: W 950 X D 420 X H 640 (mm) (including faucet: 690)

Weight: Approx. 77 kg (accessories excluded)

Raw Water Temperature: 6 ~ 43°C (42.8°F ~ 109.4°F)

Source of Electricity: AC 100V 50/60 Hz

Power Consumption: Approx. 660W

The World's First! Breakthrough Product that is energy-saving and environmentally-symbiotic can be powered by solar units.

Sea water, rain water, pond water, river water and salt water become potable water.

This unit has been made smaller and more compact, making it easy to carry at time of disasters.

A monitor for safe and potable water using a microcomputer ensures safe use. Hypochlorite Adding Device enclosed.

Filter blockage can be visually confirmed by use of the transparent pre-treatment filter case.

The design allows users to purify water easily.



Caster attachment makes it possible to move it with one hand.

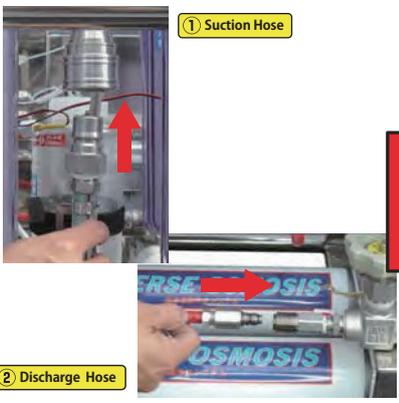


Power supply is secured by solar panels.

# Even sea water can be purified in large quantities.

Applications include but not limited to: Use of rain water, disaster measures, salt damage, groundwater pollution, BCP (Business Continuity Planning), CSR (Corporate Social Responsibility), GSR (Global Social Responsibility), CCP (Community Continuity Plan), etc.

## Operation Procedures Purified water is safe to drink as chlorine injection function is incorporated.



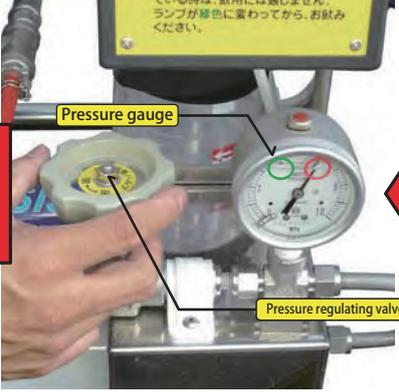
**Attach enclosed suction and discharge hoses.**  
Insert suction hose (1) and discharge hose (2) fully until it clicks.



**Put strainer in raw water.**  
Siphon the raw water from the upper part of the receptacle or body of water using enclosed float ball.



**Turn the dial for automatic chlorine injection to adjust chlorine concentration.**  
Please adjust while verifying with enclosed chlorine concentration checker.



**Turn the pressure regulating valve and set at the mark you need.**  
Be sure to set at the mark ○ of 6.0 Mpa for sea water, and 4.0 Mpa for fresh water.



**Turn on the monitor switch to verify safe and potable water.**  
Verify if it's purified after buzzer beeps and system check completes.

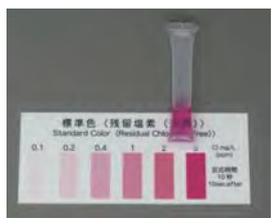


**When green lamp lights up, potable water is ready.**  
Mine Marine Filter makes palatable mineral water.

### Supplementary Instructions



**Can be powered by car battery.**  
Used with an inverter (sold separately), the unit can be powered by automotive batteries (CVR-M155J).



**Chlorine concentration check**  
Free residual chlorine concentration of 0.2 mg/L or more is set forth in Water Supply Act. Please check using the enclosed Chlorine Checker.



**Filter replacement during purification**  
Pre-treatment filter can be easily changed even when it operates during purification.



**Crystal Valley**  
Reverse Osmosis Membrane  
Water Purification System

Crystal Valley is water purification system that was spun off from "Open Laboratory" called JAXA.

JAXA is an independent administrative corporation, Japan Aerospace eXploration Agency



**Rain water, river water, lake water and sea water become potable water!**

Proprietary special filter removes carcinogens such as nitrite nitrogen, boron, bromine, radioactive substances, agrichemicals, etc. that cannot be removed by hollow fiber, active carbon filter or other RO filters.

**Special active carbon filter**  
foul smell and taste, mold smell, chlorinous odor, residual chlorine, phenols, etc. (CV-105JT-R•CV-205JT-R•CVR-T41J)

**Special fine particles filtration filter**  
muddiness, algae, rust, water mold, bacteria, cryptosporidium, etc.

**Special reverse osmosis membrane filter**  
virus, nitrate nitrogen, nitrite nitrogen, dioxin, arsenic, asbestos, aluminum, environmental endocrine disrupter, agrichemical, pathogenic bacteria, lead, tetrachloroethylene, trihalomethane, formaldehyde, etc.

**Mine Marine Filter**  
**special active carbon+mineral added**  
After maximum purification of water, alkaline ionizes natural corals creating mineral water that is readily absorbed into the body.

**Safe Potable Water Monitor**

- The units are originally equipped with a simplified chlorine checker (pack test) for easy quality check.
- T41J, M155J and E210J constantly monitor water quality during purification by a microcomputer.

**Hypochlorite Adding System**

- T41J is originally equipped with a hypochlorite adding kit.
- M155J and E210J are originally equipped with automatic hypochlorite proportional injection devices.

Free residual chlorine concentration of 0.2 mg/L or more is set forth in Water Supply Act when water contaminated with pathogenic organism is purified during disasters.

**Disaster Response Compact Water Purifier certified by The Ministry of Defense: Water Purification Capability No. 1**



Our Crystal Valley Water Purifier was selected in 2014 from a nationwide safe water project, sponsored by the Ministry of Defense and entitled "Some water is unfit to drink, even though we want to," and awarded a rating of "Removal Capability/Functionality No. 1" among compact water purifiers.

**Disaster Response Water Purifier certified by CMA (Crisis Management Association)**



Crystal Valley Water Purifier has been certified by Crisis Management Association as "Compliant Devices related to the People Protection and Disaster Prevention" since the product is useful for unexpected problems and superior in cost effectiveness when it comes to stockpiling emergency supplies.



CMA (Crisis Management Association) is a public interest incorporated association set up mainly for "Implementing Support Services during Disasters or Providing Knowledge of Crisis Management to People and Development of Responsiveness."

**Principal Award History**

- 2001 The first Osaka Frontier Prize, Business Foundation Encouragement Section, First Prize
- 2002 The first Suita city special company prize
- 2003 The Act for the Promotion of Creative Activities by Small and Medium-Size Enterprises, The Law for Facilitating the Creation of New Business No. 1222 certification
- 2005 The Act for the Promotion of Creative Activities by Small and Medium-Size Enterprises, The Law for Facilitating the Creation of New Business No. 1069-18 certification
- 2005 Osaka prefecture foreign patent application patent subsidy, NI No. 1486 certification
- 2005 The New Technology Development Foundation (Subsidy for New Technology Development) S-No. 455 certification
- 2006 Osaka Prefecture Venture Business Support System certification
- 2006 Osaka Industrial Research Association, 56th Award for Achievement in Technology
- 2007 The Ministry of Economy, Trade and Industry, The 2nd mondzukuri Nippon Grand Award, First Prize
- 2015 Winning an all-around title at Safe Water Project hosted by the Ministry of Defense

We have been certified as the "Organization that's Contributing to the National Resilience Promotion". NEW MEDICAN TECH CORPORATION has obtained the "Resilience Certification" based on the guideline enacted by the National Resilience Promotion Office of the Cabinet Secretariat. We will continuously strive to contribute to the national resilience while strengthening its business continuity.



Resilience Certification  
Certification Registry Number E03000024

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