



Catalogue

## Highly Concentrated Hydrogen Carbonate Ion Spring **BICARBONATED**

Relieve tiredness and have beautiful skin  
by bathing in a carbonated spring every day.



### ■ Manufacture and sales base

## JESC CO.,LTD.

□ Head Office 〒020-0611 726-7 Sugo, Takizawa, Iwate

□ Morioka office 〒028-7113 24-1-78 Hirakasa, Hachimantai, Iwate **Tel: 0195-68-7411 Fax: 0195-68-7412**

## www.jesc.info

### ■ Store contracted to sell the Bicarbonated Series:

ジェ・スク  
**JesC**



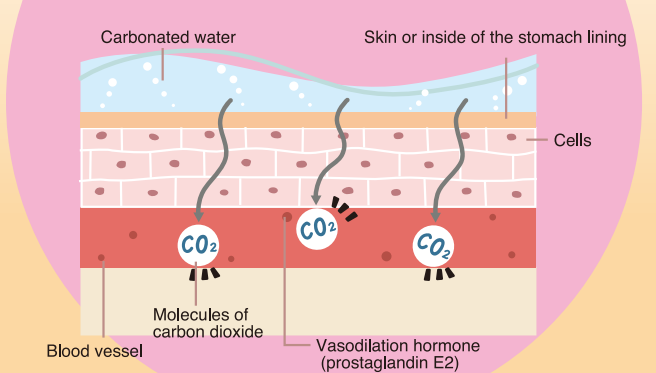
# A carbonated spring retains the youth of blood vessels and promotes good health and beautiful skin.

Diseases associated with aging blood vessels including heart attacks, strokes and cerebral hemorrhages are a part of our lives for those of us living in an aging society. It becomes difficult for oxygen and nutrients to be carried to all the cells of the body when blood circulation worsens and this places a burden on the body's organs. To combat this we recommend bathing in a carbonated spring which is effective in retaining the youthfulness of blood vessels and maintaining good health. You can enjoy bathing in a carbonated bath in your own home using the products in our company's highly concentrated carbonated spring Bicarbonated Series.

The carbon dioxide permeates through your skin and stimulates blood vessels helping to support your health everyday by lowering blood pressure, improving blood flow, raising the strength of the immune system, preventing lifestyle diseases and improving dermatosis. Bathing in a carbonated bath has also been reported to rejuvenate skin and hair as well as improving sensitivity to cold and insomnia. A carbonated spring is also effective in helping those who are suffering from the stress or tiredness of daily life to unwind. Get beautiful skin and good health by soaking in a carbonated spring at the end of every day.

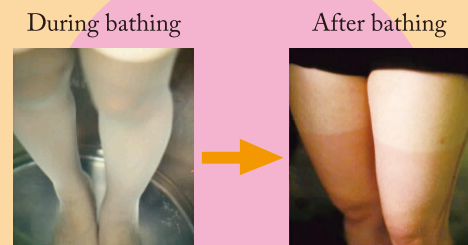
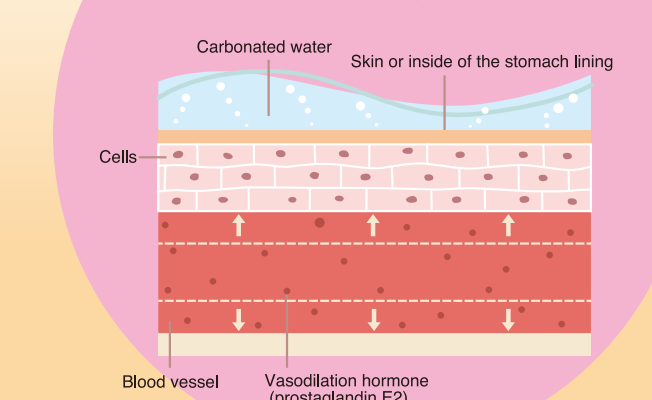
## Carbonated water stimulates secretion of hormones

Carbon dioxide permeates through the skin or the surface of the stomach lining. The carbon dioxide that enters into blood vessels stimulates the blood vessels from the inside and promotes excretion of prostaglandin E2, a hormone that causes widening of blood vessels.



## Widening of blood vessels and improving of blood flow

Under the action of the vasodilation hormone, the blood vessels widen and blood flow increases. This makes it easier than before for oxygen and nutrients be carried by the blood to all the cells of the body.



Take a look at the appearance of feet during and after bathing in a warm carbonated water footbath. Carbon dioxide permeates directly through the skin of the parts of the feet soaked in the water. This improves blood circulation and the skin has a reddish tinge.

## Treatment of ASO with highly concentrated carbonated bathing



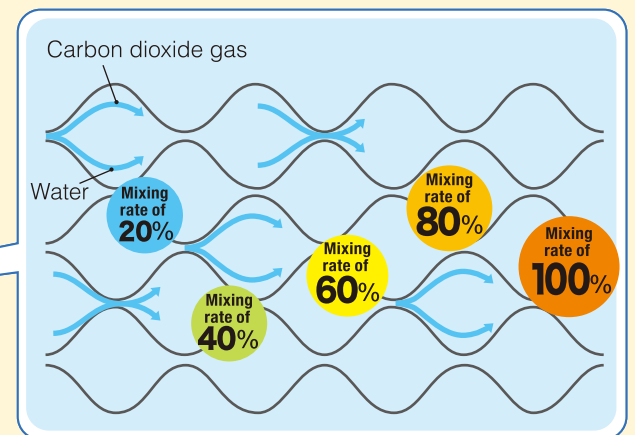
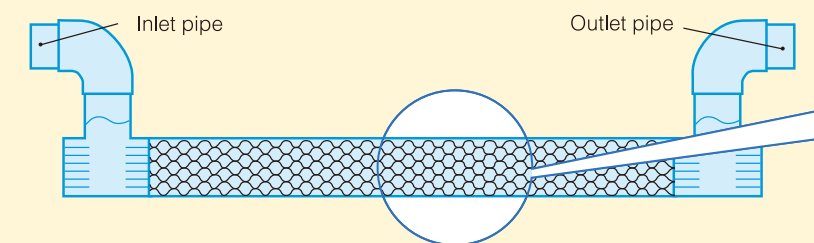
This is an example of how arteriosclerosis obliterans (ASO) has improved after 1 year of highly concentrated carbonated spring bathing once a day.

Patent acquisition

## Highly concentrated hydrogen carbonate ion spring BICARBONATED

We supply hydrogen carbonate ion spring equipment which can be set up indoors or outdoors for you to enjoy the true highly concentrated carbonated spring experience in your own home. The equipment is compact in size and runs silently as it doesn't use motors or pumps so you won't be bothered by any noise when using it.

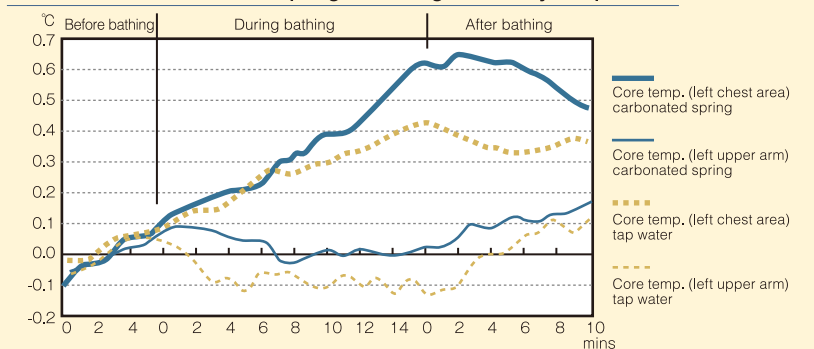
**This equipment is made use of as part of the treatments offered at some medical centers. (Nagoya Kyouritsu Hospital)**



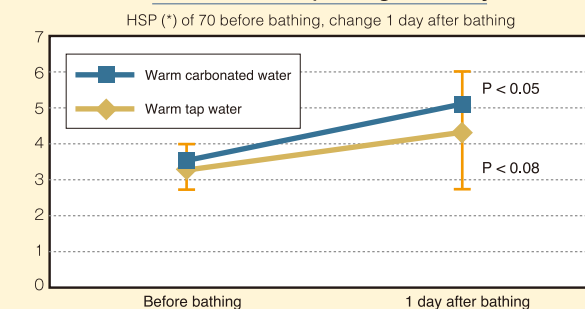
## Our equipment achieves a miraculous 1,300PPM unseen in models of these types of products at other companies

A carbonated spring is a spring with more than 0.25g (250ppm) of carbon dioxide dissolved in each liter of hot water. Springs with a concentration greater than 1g (1,000ppm) are classed as highly concentrated carbonated springs. It is said that the greater the concentration of the carbonated spring, the greater the effectiveness it shows. The design of our Bicarbonated Series gradually raises the mixing rate of the water and carbon dioxide gas by applying high pressure inside the equipment a number of times resulting in a highly concentrated carbonated spring. A concentration of 1,300ppm has been certified for our product by a measurement taken by a public institution using the Standard Method of Analysis for Mineral Springs.

### The effect of a carbonated spring on raising core body temperature

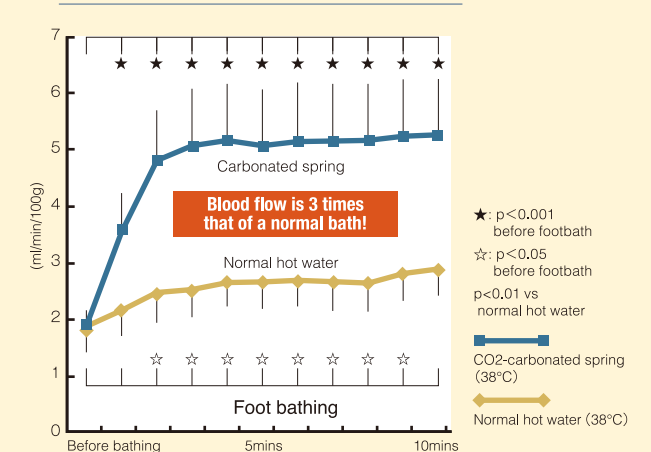


### The effect of improving immunity



\*HSP (heat shock protein)  
Repair of damaged proteins increases with raising of body temperature. Immunity functions are also enhanced.  
\*From: Rejuvenating the Age of Your Blood Vessels "Carbonated Bathing" Written by Kawahara Hirohisa. Edited by Yamada Tetsuya and Moriyama Yoshifumi. Published by Gentosha Co.Ltd.

### Change in blood flow due to a footbath



## Main diseases and conditions it benefits

Chronic pain or stiffness in muscles or joints (including rheumatism, osteoarthritis, lower back pain, neuralgia, stiff shoulders, bruises, sprains), stiffness in muscles due to paralysis or numbness, sensitivity to cold, peripheral circulatory failure, decline in gastrointestinal functions (including stomach being aggravated after eating and gas accumulating in bowels), slightly raised blood pressure, impaired glucose tolerance (diabetes), slightly elevated blood cholesterol, light asthma or pulmonary emphysema symptoms, hemorrhoid pain, symptoms related to stress (including sleep disorders and depression), recuperation after illness, recovery from exhaustion and improving general health.



# BICARBONATED BC-1000

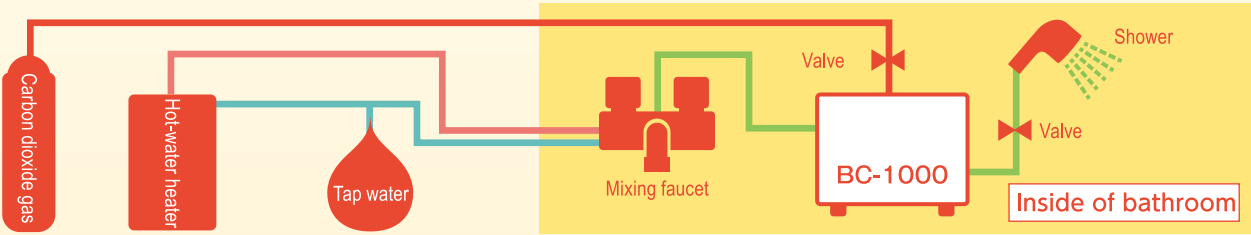
Popular for use as a shower in beauty salons and pet shops!  
Perfectly removes dirt from the scalp.



Pipe size	15A (G1/2)	Gas pipe size	Internal diameter 6.5mm
Recommended pressure	300kpa	Pressure loss	0.078kpa
No. of circuits	1	Performance	1050ppm*
Applications	Exclusively for use with showers		
Special characteristic	Excellent cleaning efficacy		
Water temperature	Up to 50°C (warm water per min: 7-15l/min)		
Place to be installed	Indoors (so there' s no danger of freezing)		

\*At a water temperature of 37.3°C

■ Installation diagram



# BICARBONATED BC-2000

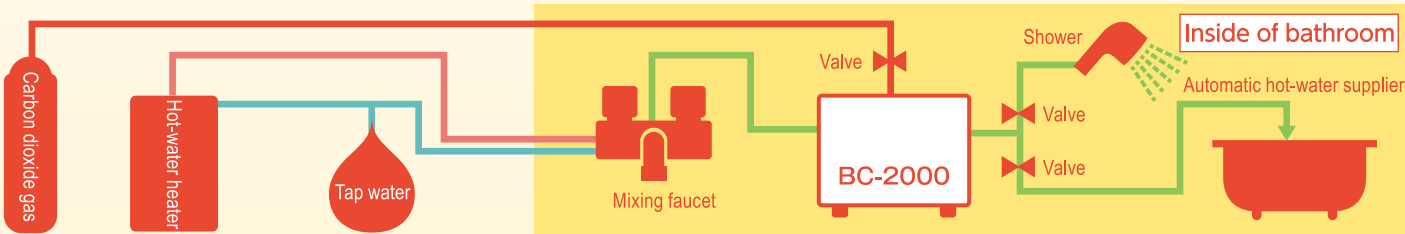
Made use of in medical centers.



Pipe size	15A (G1/2)	Gas pipe size	Internal diameter 6.5mm
Recommended pressure	300kpa	Pressure loss	0.078kpa
No. of circuits	1	Performance	1300ppm*
Applications	For use with baths and showers and for drinking water		
Special characteristic	Highly concentrated carbonated spring		
Water temperature	Up to 50°C (warm water per min: 7-15l/min)		
Place to be installed	Indoors (so there' s no danger of freezing)		

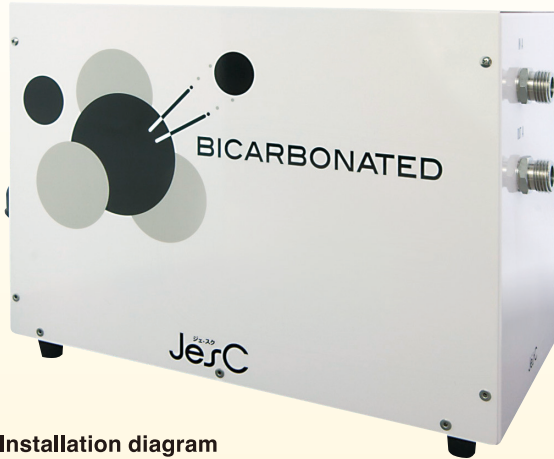
\*At a water temperature of 37.3°C

■ Installation diagram



# BICARBONATED BC-5000

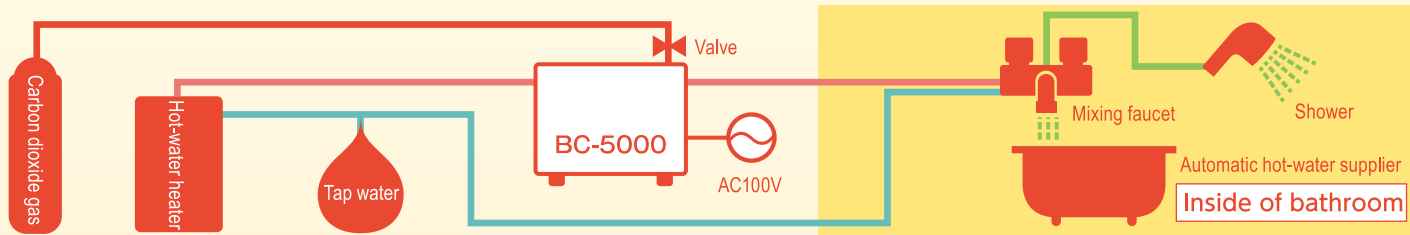
Possible to install outdoors for use in the garden.  
You can use this model with an automatic hot-water supplier and a hot water supply.



Pipe size	15A (G1/2)	Gas pipe size	Internal diameter 6.5mm
Recommended pressure	300kpa	Pressure loss	0.078kpa
No. of circuits	1	Performance	1050ppm*
Applications	Specially designed for use with a hot water supply or with an automatic hot-water supplier		
Special characteristic	Highly concentrated carbonated spring		
Water temperature	Up to 60°C (warm water per min: 7-15l/min)		
Place to be installed	Indoors or outdoors (ok in temperatures down to -25°C)		

\*At a water temperature of 37.3°C

■ Installation diagram



# BICARBONATED BC-5000WA

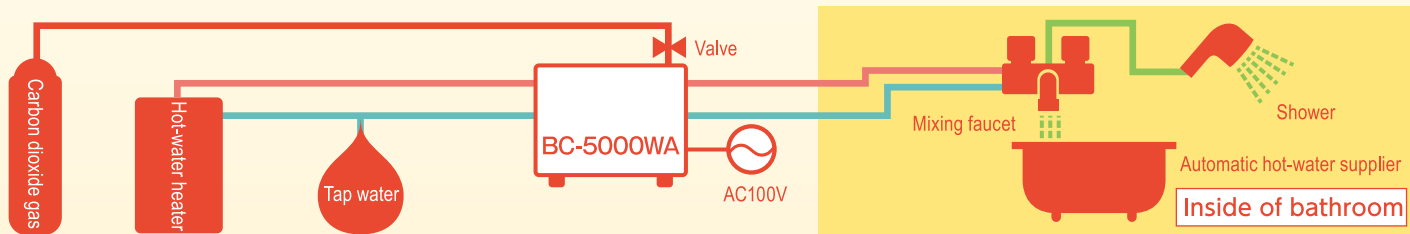
Can be used with household water supply and hot water supply. (Unable to be used with an automatic hot-water supplier.)



Pipe size	15A (G1/2)	Gas pipe size	Internal diameter 6.5mm
Recommended pressure	300kpa	Pressure loss	0.078kpa
No. of circuits	2	Performance	1300ppm*
Applications	Can be used together with the house water supply and hot water supply		
Special characteristic	Able to be used with a hot-water heater		
Water temperature	Up to 60°C (warm water per min: 7-15l/min)		
Place to be installed	Indoors or outdoors (ok in temperatures down to -25°C)		

\*At a water temperature of 37.3°C

■ Installation diagram



BICARBONATED BC-5000WB

Can be used together with a shower and an automatic hot-water supplier.  
No. 1 selling product.

Maximum concentration  
**1,300 PPM**

Power 100V 50/60Hz

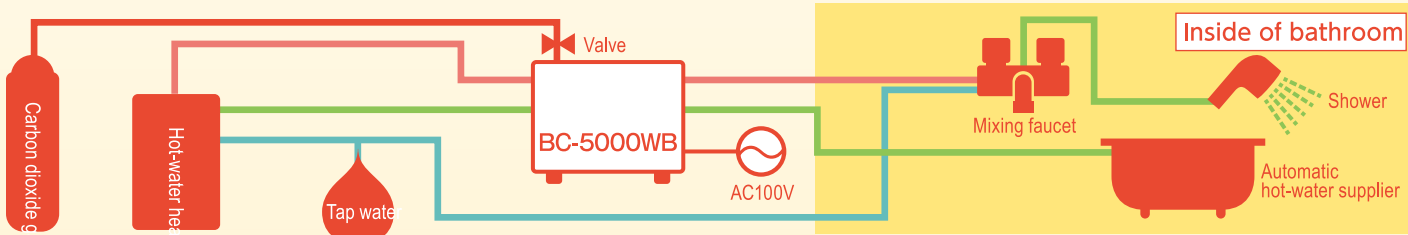
Electrical consumption  
17W x2



Pipe size	15A (G1/2)	Gas pipe size	Internal diameter 6.5mm
Recommended pressure	300kpa	Pressure loss	0.078kpa
No. of circuits	2	Performance	1300ppm*
Applications	Used together with the automatic hot-water supplier and hot water supply		
Special characteristic	Able to be run within the hot-water supply circuit and the automatic hot-water supplier circuit		
Water temperature	Up to 60°C (warm water per min: 7-15l/min)		
Place to be installed	Indoors or outdoors (ok in temperatures down to -25°C)		

\*At a water temperature of 37.3°C

■ Installation diagram



BICARBONATED BC-25000

Used at large-scale facilities and commercial facilities.

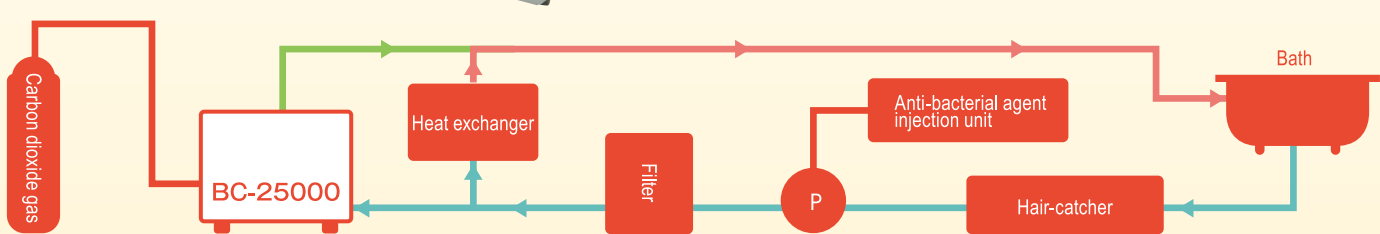
Maximum concentration  
**1,300 PPM**



Pipe size	25A (R1 inch)	Gas pipe size	15A (G1/2)
Recommended pressure	300kpa	Pressure loss	0.152kpa
No. of circuits	1	Performance	1300ppm*
Applications	Used at large public baths *Recommended for free flowing hot springs.		
Special characteristic	Highly concentrated carbonated spring		
Water temperature	Up to 60°C (warm water per min: 0-37l/min)		
Place to be installed	Indoors (so there' s no danger of freezing)		

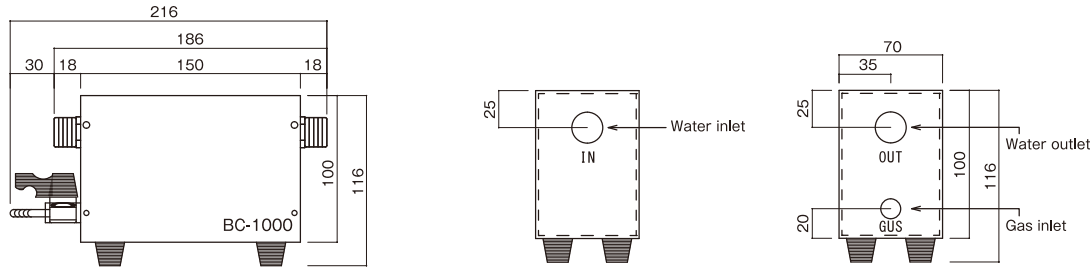
\*At a water temperature of 37.3°C

■ Installation diagram

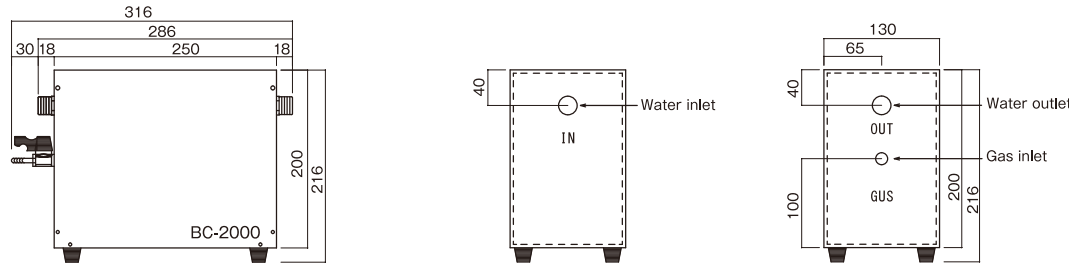


External measuring chart of equipment

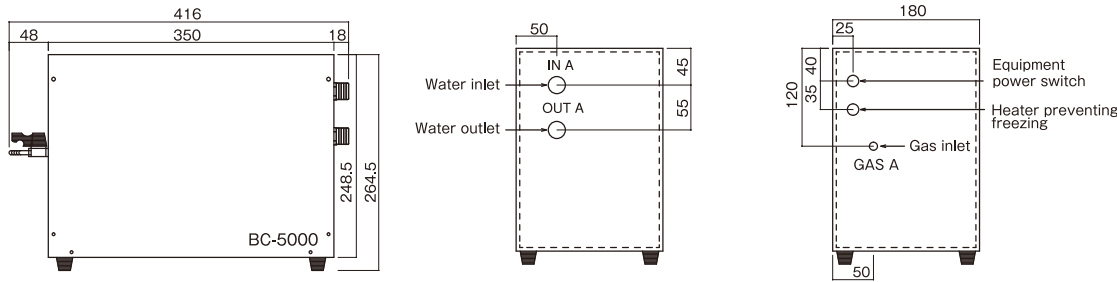
BC-1000



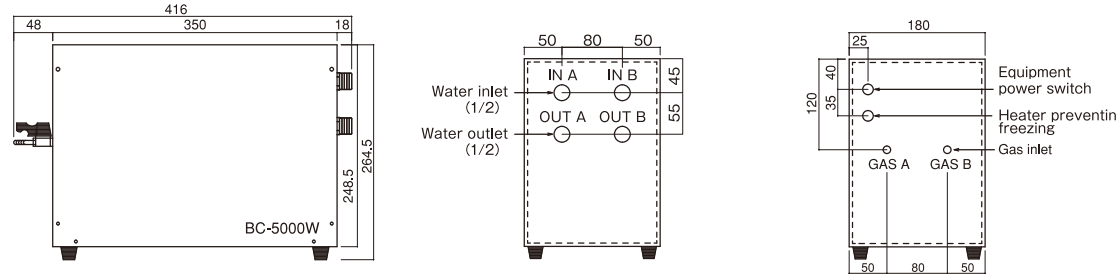
BC-2000



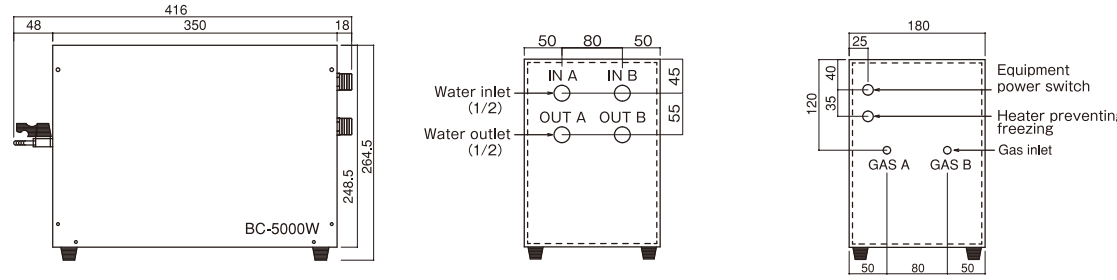
BC-5000



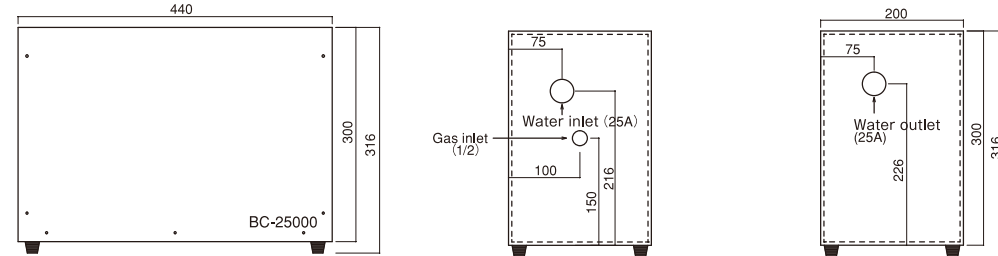
BC-5000WA



BC-5000WB



BC-25000







Installation example  
Beauty salon



Installation example  
General household



Installation example  
Hospital/  
Care facility



Installation example  
Hot spring facility

## Customer's comments

We have received a number of comments about carbonated spring bathing from customers who kindly purchased and had one of our carbonated spring products installed.

- The swelling on my feet has disappeared, my sensitivity to cold has eased and my chapped hands have gotten better. (Customer T, Yamagata Prefecture)
- As I've gotten older I have become more conscious about my body odor. However, since I've been bathing in the carbonated spring, I have been told by my family that my body odor has gone. (Customer A, Iwate Prefecture)
- The numbness that I used to get in my hands and feet that would become painful by the following morning has eased making my daily life much easier. The carbonated spring products have been a great help to me. (Customer S, Fukushima)
- I was troubled with stiff shoulders and lower back pain and had to take massages every week. However, after starting to bathe in a carbonated spring every week, my pain eased. (Customer H, Tokyo)

- I had the opportunity to use carbonated bathing at my diabetes internal medicine department. I found that the skin colour of my patients improved after carbonated bathing. (Customer N, international medical center)
- I believe there is a tendency for formation of granulation on the feet to improve due to the effect of carbonated springs. (Customer Y, national medical center)
- The number of customers was dropping year by year and so to try and solve this we did renovations to make carbonated bathing our main attraction. Our customers have increased and we have surpassed the goals of our business plan at that time. (Customer K, spa bath-house)
- We use water direct from a natural spring and installed a carbonated spring. Word of mouth has been very effective since installing it and we expect the number of customers to increase still further. (Customer H, health facility)
- Our carbonated spring bath is always full of customers since installing the carbonated spring equipment. The carbonated spring bath is our most popular bath! (Customer K, hot spring facility)
- Since installing the carbonated spring, we have about 160 customers a day on average. The carbonated spring is a large factor in maintaining this number of customers. (Customer T, hot spring facility)



Optional parts (sold separately)



Carbon dioxide gas regulator	From ¥21,000
Metal fittings for fixing main equipment to walls	From ¥8,000
Carbon dioxide gas cylinder stand	From ¥15,000 (7k)
Carbon dioxide gas cylinder container (with meter showing amount remaining)	From ¥25,000
Installation and conversion adapter	From ¥2,000
Resin ball valve	From ¥5,000
Shower hose (1.5m)	From ¥3,000
Specialty shower head	From ¥7,500
Hose for carbon dioxide gas	From 600/M
Metal fittings set to prevent cylinder falling over	From ¥2,500
Cylinder cover	From ¥3,000
Shower and bath diverger set (available for use with all makes of showers and baths)	From ¥8,500
pH meter	From ¥8,000

Supply and delivery of gas

Carbon dioxide gas can be delivered to all areas of Japan.  
Please contact us for details.  
We accept enquiries on our website or by email.



Cautionary points

1. The effects of weakly acidic water

- 1) Effect of the bath tub (the material of its wetted surface)  
The effect on the inner surface of the bath tub is varies dependent on the material it' s made from.
- A) In the case of the surface being an enameled metal cast or stainless steel, there is almost never a problem.
- B) In the case that the surface is made of resin, there is almost never a problem. However, depending on the type of resin, if you use the carbonated spring product over a long time, there are cases where rough deposits appear on the surface of the bath tub.
- C) In the case of tiles or natural stone, there are many types of tile where there is no problem with acid resistance. However, the tile grouting (including mortar and concrete) reacts more readily with acidic water and so the grouting can decline in thickness quicker than with neutral water.  
Therefore, please have tile grouting work done with a mortar that is resistant to acid rather than an all-purpose mortar.  
The acid resistance of natural stone differs depending on the type of natural stone. It' s best to check at the stonemason where you purchased the natural stone. In general, stones with large calcium contents dissolve away readily and are not suitable for weakly acidic water. Limestone dissolves quite easily even in neutral water. It is often difficult to do reconstruction work on the tile grouting of made-to order bath tubs. It is possible for us to paint the grouting with a coating that is resistant to acid though. However, you will be unable to use the bath tub for 2-3 days as we have to completely drain the water from the bath tub and carry out the work after the grouting has completely dried out. The coating material often contains organic solvents so adequate ventilation and precautions are necessary. Additionally, the coating may need to be applied regularly (about once a year) depending on usage.

2. Please use acid-resistant stainless steel or resin products for the common metal fittings regularly used in bath tubs (including metal parts for recirculation filtration of discharged water or drainage and hand rails). With brass and metal-plated products, there is a concern that the metal plating could be damaged by acidic water.

However, there is almost no effect due to the properties of the carbonated water on parts that only come into contact with it for short periods of time (including the surface of the bathroom floor, the bathroom wall or countertops).

1) Using together with accessory devices

Please confirm that accessory bath tub parts connected to the manmade carbonated spring equipment or used with it including recirculation filtration apparatus, heat exchangers and pumps are resistant to acidic water. Please carry out any necessary work in regards to connecting the equipment whilst referring to the enclosed technical works manual.

3. Prventing dissolved carbon dioxide gas being given off

1) Bath spout

It is recommended to have it designed and built so that the water supplying the carbonated water to the bath is released into the lower half of the bath tub. This is because the carbon dioxide gas will diffuse into the air more readily if it is not released into the lower part of the bath tub.



2) The equipment cannot be used with a bubble generator

The dissolved carbon dioxide gas will diffuse under physical influences (e.g. agitation or heating). However, with the addition of air bubbles to the bath, it diffuses even more readily. For this reason, the carbonated spring equipment cannot be used together with vibration or jet water functions.

3) If there is a boiler fitted below the level of the bath tub, an automatic hot-water supplier with a circulation loop cannot be installed.

4. Water pressure (pressure of the hot water supplied)

Be sure to check the water pressure before ordering carbonated spring equipment. If the water pressure is low, the water will come out the shower or other water outlets weakly meaning it will not be possible to ensure there is adequate flow and pressure for the carbonated spring equipment. Use of a direct pressure type heat source device or installation of a hot-water supply booster pump may become necessary.

5. Necessity of periodic inspections

Parts used in the Bicarbonated Series wear and deteriorate over time or due to the place or way in which they are used. It can be dangerous to continue to use worn parts or parts that have deteriorated so it is recommended that you have a specialist technician carry out periodic inspections.

Time period for periodic inspections

- It is recommended that you have periodic inspections done every 2 years from when you buy the equipment.

1) Periodic inspections

- If it is judged that parts have deteriorated, they will be replaced where necessary.
- A specialist technician will examine and check the installation, safety and running of the equipment during the periodic inspection. The technician will examine parts that wear over time due to usage and parts that deteriorate easily as well as cleaning and servicing important parts of the main body of the equipment.

2) Companies that carry out the periodic inspections

- You can contact the shop where you bought the carbonated spring equipment, the company that did the installation of it or our company that produced it concerning having periodic inspections done.

3) Costs of the periodic inspection

- Please contact the company or shop who will carry out the inspections about the costs involved.

Details of the periodic inspection

- \*The details concerning the examination of the equipment differs according to which product it is.
- Measurement of the pH of the carbonated water and check for leaks.
- Setting of the pressure or adjustment of the pressure of the carbon dioxide gas.
- Setting of the flow or adjustment of the flow of the carbon dioxide gas.
- Check the system operations.
- Test the anti-freezing heater unit
- Check the set-up of the main equipment, that there are no abnormal noises and the state of the gas piping.
- Test the running of the equipment.
- Other general tests and checks (including how the installation is looking, temperature settings and cleaning of devices).