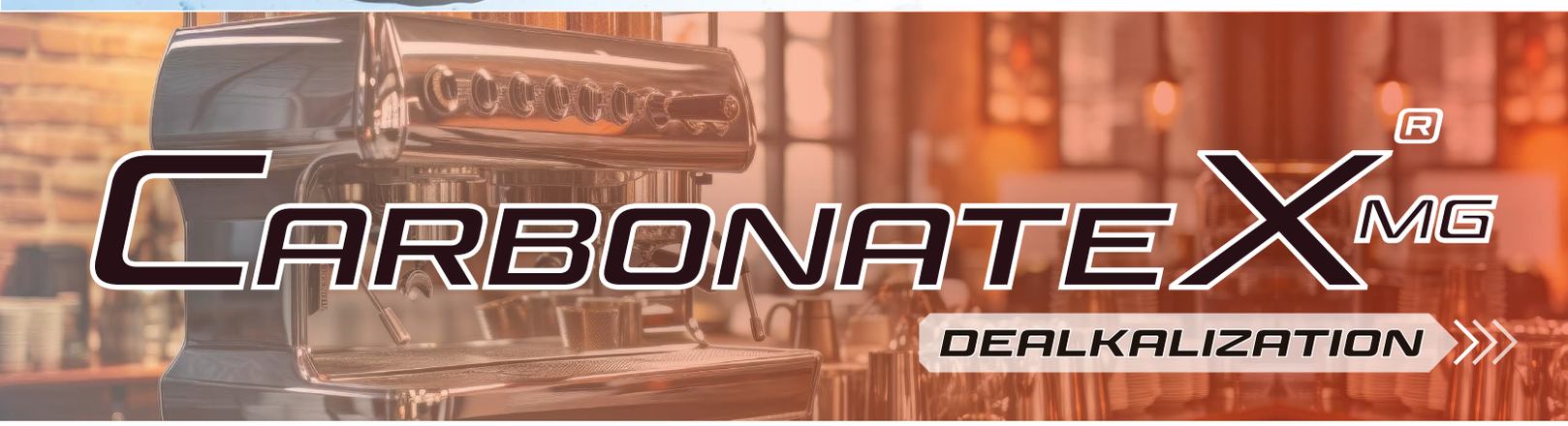
WATCHER®
WATCH WATER
a Water Company

FILTERSORB
FILTRATION
ADSORPTION
INSTANT PRODUCTS
OXY TREATMENT
SYSTEMS

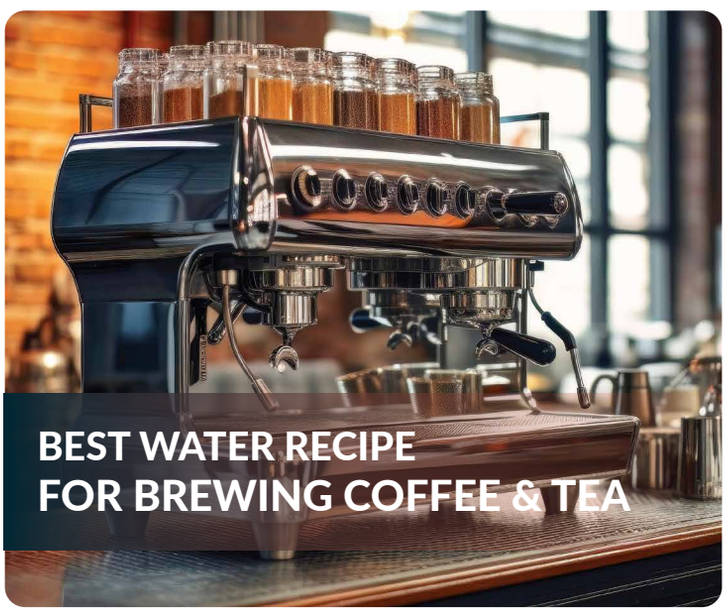


CARBONATE X-MG®

DEALKALIZATION

INTRODUCTION

Watch Water® is a well-known company specializing in water treatment solutions and innovative products for various water treatment applications. CARBONATE X-MG is a specific invention developed by Watch Water®, It is likely designed to address specific water treatment challenges related to carbonate ions. Using a product like CARBONATE X-MG can help prevent scale build and adding Magnesium, improve water quality, and maintain the performance of appliances and systems that are effected by Carbonate ions.



Decarbonating water with CARBONATE X-MG can be convenient way to infuse magnesium into your coffee water and drinking water. This allows you to create your own magnesium infused super healthy water at home. As the water passes through the CARBONATE X-MG loaded with magnesium oxide, magnesium ions are released into the drinking water, effectively infusing the water with magnesium content of the water for 600 potential health benefits.

ADDITION OF HYDROSORB ADSORBER

HydroSorb Adsorber based on (MOFs) **Metallic Organic Frameworks** and are very unique for Advanced water treatment. It removes all **Pharmaceutical, Microplastics, Industrial Chemicals**, PFOS-PFOA related substances, complete reduction of disinfection by products (DBPs), Organics which are very harmful for **Coffee & Drinking water**.

Removes all

PHARMACEUTICAL, MICROPLASTICS, INDUSTRIAL CHEMICALS (PFOS-PFOA)

Chloramines are disinfectant chemicals that are commonly used in drinking water treatment to kill harmful bacteria and other pathogens. Chloramines have potential health concerns associated with their presence in **Coffee Water** as well as **Drinking Water**. HydroSorb is the best available technology to remove **organics & Chloramines**.

MEMBER Water Quality ASSOCIATION

PREMIUM QUALITY
MADE IN GERMANY

CARBONATE X-MG

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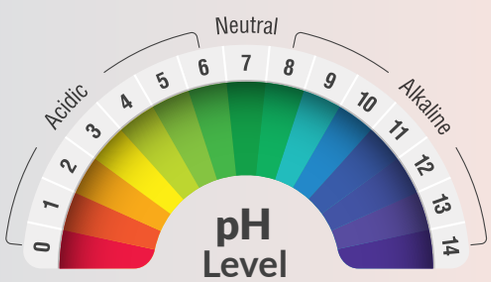
CHEMISTRY OF // CARBONATE X-MG

The potential revolution in the coffee industry achieved by CARBONATE X-MG by transforming Carbonate ions into Bicarbonate ions through hydrogen and pH adjustment represents a groundbreaking innovation that could reshape the way coffee is brewed, enjoyed and appreciated. Bicarbonate ions can help create a more balanced and smoother extraction process, resulting in a more flavorful and enjoyable cup of coffee.



The ideal pH level for brewing coffee is around 7.4 almost (neutral). Water that is too acidic or alkaline can affect the extraction process and after the flavor of the coffee.

Bicarbonate ion, also known as bicarbonate or **HCO_3**, plays a crucial role in maintaining the Acid-Base balance in the body. It acts as a buffer, helping to regulate the pH of bodily fluids, such as blood and urine, to keep them within a normal range. Bicarbonate ions are produced in the kidneys and help to neutralize excess acids in the body. Excess acids in the body, which can be produced as a byproduct of metabolism or breakdown of certain foods.

CARBONATE X-MG

WATER HELPS TO PREVENT ACIDOSIS, A CONDITION IN WHICH THE BLOOD BECOMES TOO ACIDIC.

CARBONATE X-MG water is recommended for individuals with conditions that affect acid-base balance, CARBONATE X-MG water is the best for the treatment for acidosis or to help alleviate symptoms of heartburn or indigestion and acid reflux, it also supports proper digestion and nutrient absorption in the small intestine.

More to read on Bicarbonate water

MAGNESIUM - THE COFFEE MAGIC

Infusing your coffee water with **Magnesium (Mg)** can indeed elevate your coffee experience and provide a superior taste. Magnesium has a slightly alkaline flavor profile that can help balance the acidity of coffee, resulting in a smoother and less bitter taste. Magnesium is known to enhance the extraction of coffee compounds, leading to a more flavorful and aromatic cup of coffee.

This is the only invention and innovation in the coffee industry, and the Watch Water® creation of coffee water with **Bicarbonate** and infused Magnesium is just a revolution. This type of water is designed to enhance the flavor and quality of the coffee by adjusting pH level and mineral content of the water used in the brewing process.

Choosing High-quality water made by CARBONATE X-MG for brewing coffee is indeed an excellent decision here are some excellent reasons why Bicarbonate hardness is preferred for coffee brewing.

- Flavor extraction
- pH balance
- Buffering Capacity (HCO_3)
- Mouthfeel
- Mg Magnesium infusion
- PFOA Removal of most of the very dangerous contaminants like PFOA

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CarbonateX MG

- Is Food Grade
- Bead-Shaped And Has A Special Bead Size.
- For Use In Coffee Machines And Household Filter Systems.
- Mixed With Magnesium Oxide.
- Suitable For Coffee Machines And Household Health Filters.

GENERAL DESCRIPTION

Change on the surface	Positive
Functional Group	Carbonate Removal
Matrix	Mixed with MOFs
Structure	increased surface
Appearance	White, Opaque & Black
Bead Size	0.4–3.4 mm
Bulk density	850-880g/liter
Stability	
pH range	7.4
Temperature	20°C to 80°C

CHEMISTRY TO CONVERT CARBONATE IONS

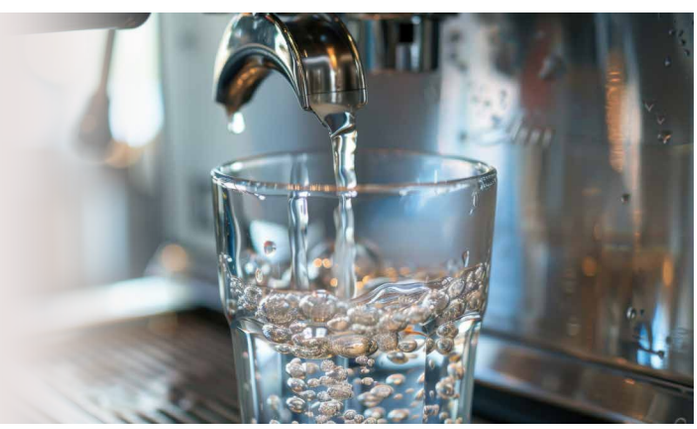
CARBONATE X-MG is a unique product to convert carbonate ions (CO_3^{2-}) into bicarbonate ions (HCO_3^-) by increasing the acidity levels, the pH of the solution needs to be lowered. CARBONATE X-MG involves adding an acid to the solution, which will donate hydrogen (H^+) to react with the carbonate ions. The reaction can be represented as follows:

$$CO_3^{2-} + H^+ \rightarrow HCO_3^-$$

By increasing the acidity levels
lowering the pH

more hydrogen ions are available to react with carbonate ions, resulting in the formation of bicarbonate ions.

Bicarbonate ions are more stable in acidic conditions and are less likely to precipitate out as **scale** compared to carbonate ions. CARBONATE X-MG used in water treatment processes & chemical reactions to adjust **the alkalinity levels**, prevent scaling issues, and optimize water quality for all food and beverage applications.



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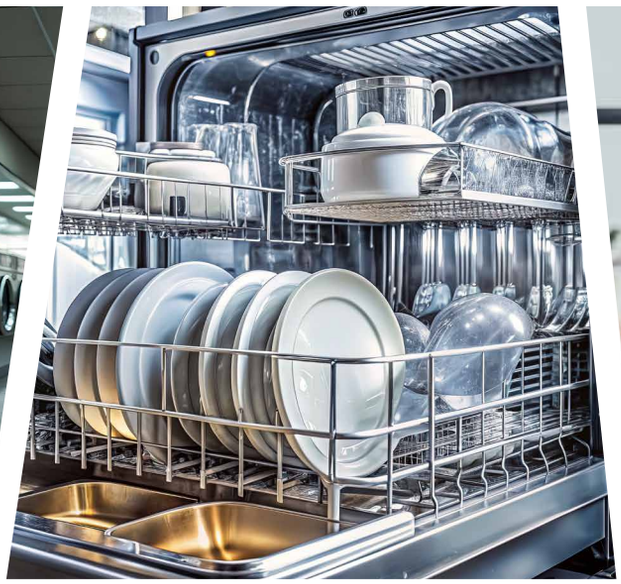
Use of **Carbonate X-mg media** to manufacture water filters and systems, can help to change carbonate ions to bicarbonate ions, balance the pH levels of water by neutralizing acidity. This can be beneficial for improving the taste and quality of drinking water and water used for brewing coffee, tea, and all other beverages.

When it comes to manufacturing filter systems, use **Carbonate X-mg** media. If you are looking to develop a filter system or purchase a filter system that uses **Carbonate X-mg** for water treatment, please consult us to find out. Top water treatment specialists for water filtration systems. We can provide guidance on the best type of equipment to use.

CARBONATEX-MG ADDED VALUE

An important application for **Carbonate X-mg** is the production of cartridges or **Water Filters**, which are used mainly for creating decarbonized water in the preparation of **Hot Drinks** such as coffee and tea. Another key application for **Carbonate X-mg** is for all vending machines, including **dishwashers** and washing machines. These filters are used both at home and commercially.

The **Carbonate X-mg** accounts for the biggest proportion of the mass of these cartridges and vending filters. The high level of sustainability of the **Carbonate X-mg** from the Filtersorb product range therefore has a major impact on the sustainability balance of consumer-oriented end products such as the aforementioned cartridges. **Carbonate X-mg** is a food grade product.



Carbonate X-mg Designer Water:

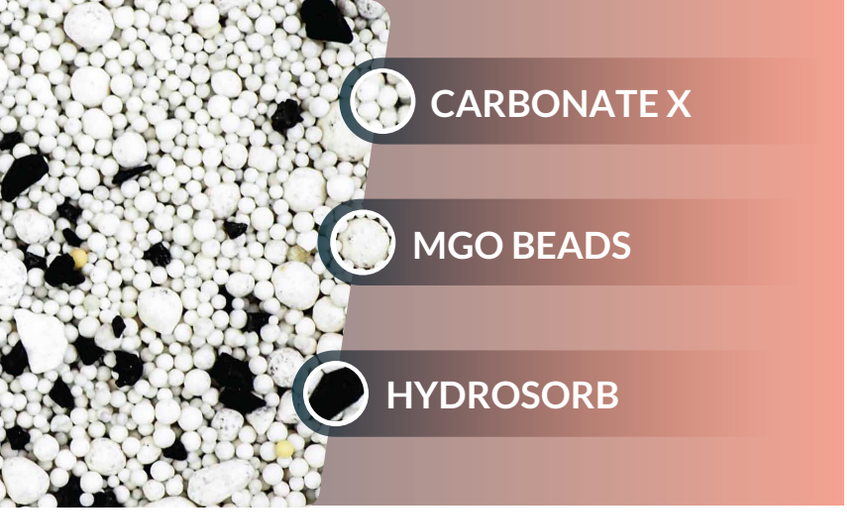
High-Quality Drinking Water

Bicarbonation HCO_3^-

Flavour Infusion

Taste Like No Other Water

Presentation of Your Designer Water



CARBONATE X

MGO BEADS

HYDROSORB

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SYSTEM DESIGN

CARBONATE X-MG operates efficiently within a flow range of **20 to 60** bed volumes per hour (BV/h).

1 liter of CARBONATE X-MG can treat up to 60 liters per hour (0.264 GPM) of water.

Optimum performance is achieved at slower BV/h, specifically 30 BV/h. This corresponds to one liter of CARBONATE X-MG treating 30 liters per hour (0.132 GPM).

System Type	Tank Type	CARBONATE X-MG (Volume)	Optimal Flowrate at 30BV/h		Maximum Flowrate at 60BV/h	
			LPH	GPM	LPH	GPM
Aquapurifier X-MG (S)	-	1.49 liter	44.7	0.19	89.4	0.39
Aquapurifier X-MG (M)	-	2.64 liter	79.2	0.34	158.4	0.69
Aquapurifier X-MG (L)	-	4.44 liter	133.2	0.58	266.4	1.17
QES Aquapurifier X-MG	07x35	20.0 liter	600	2.64	1200	5.28
QES Aquapurifier X-MG	08x35	25.0 liter	750	3.30	1500	6.60
QES Aquapurifier X-MG	09x35	31.0 liter	930	4.09	1860	8.18
QES Aquapurifier X-MG	10x35	38.0 liter	1140	5.01	2280	10.03.2

AquaPurifier Catridges:
Seamless installation, endless convenience.

AquaPurifier with QES Valve:
Sustainability meets adaptability

CONVENIENT TO HANDLE WITHIN SECONDS!

Shut-off Inlet/Outlet connections → Remove handle lock & turn the lever → Remove handle head & save for next use. → Remove Seal & Install new tank → Insert Handle lock & proceed for service

TYPICAL SERVICE OPERATION REMOVING ALKALINITY (CO_3)

In service operation, water is normally pumped up-flow through CARBONATE X-MG, which is retained within a pressure vessel. The vessel has top and bottom distribution/collection systems designed to ensure the water passes evenly through the CARBONATE X-MG bed. As the water passes through the CARBONATE X-MG, the **carbonate** ions are exchanged into **bicarbonate anions** — usually calcium and sodium are exchanged with hydrogen ions and healthy magnesium ions.

In most naturally occurring waters, the combined calcium and carbonate levels ($CaCO_3$) Total hardness, is greater than the levels of bicarbonate (HCO_3) present, where all species are expressed as calcium carbonate ($CaCO_3$).

UPGRADE YOUR WATER SYSTEM FOR

HEALTHIER WATER
SUPERIOR EQUIPMENT PERFORMANCE

CARBONATE X-MG is most ideal for removing Temporary Hardness and protecting all **Vending Machines** from scaling.

Dealkalized water (decarbonized) has a higher hydrogen ion (H+) content when treated by CARBONATE X-MG and therefore lower pH. In the service cycle the pH is around 5.7–6.0, depending on the temporary hardness leakage.

Note: Replace CARBONATE X-MG when it becomes exhausted.

WATCH WATER® - CARBONATE X-MG

CARBONATE X-MG is an innovative, eco-friendly water treatment solution exclusively developed and manufactured by Watch Water® GmbH in Mannheim, Germany.

This advanced media combines cutting-edge proprietary technologies to deliver exceptional performance and durability in both residential and commercial applications. Designed to combat scale buildup, regulate alkalinity, and enhance water quality, Carbonate X MG ensures reliable and long-lasting results.

Its ready-to-use formulation simplifies water treatment processes, making it a trusted choice for improving system efficiency and achieving superior water quality.

Disclaimer : *The information in this publication is based on reliable data and is provided in good faith, without warranty or performance guarantee, as product use conditions are beyond our control. Watch Water GmbH, Germany, does not offer express or implied warranties, including merchantability or fitness for a specific purpose. Users should assess product suitability and performance with their equipment. Specifications may change without notice. Please note that the filter media in this brochure do not eliminate bacteria. Do not use our products with microbiologically unsafe or unknown-quality water without proper disinfection. Watch Water GmbH, Germany, is not liable for consequential or incidental damages, such as lost profits from product use.*

Standard Packaging

Packging	Weight of product	Quantity/ pallet	Gross Wt./ pallet
Drum (60 L)	49 kg	18	965 kg

★ *Other packaging can be considered on request*

21.1.25V2

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