

FILTERSORB[®] SP - *Benefits*

CWG SCALE PROTECT



100 % scale removal for pipes and hardware

Scale prevention

No backwash

No chemicals

Highly efficient

High flow rates realisable

Long lifetime

contact time: 9 seconds

ph - range: 6.5 - 11

Temperature (raw water): 150 °F (65 °C)

Water hardness: not limited

Chlorine content: < 3 ppm

▶ **The water must be free from oil and grease.
Fe, Mn and H₂S pre-filtration required.**



Operating conditions



FILTERSORB® SP - DATA

Problems caused by water.

Hard water is water that has a high mineral content. The hardness results mainly from magnesium (Mg^{2+}) and calcium (Ca^{2+}) ions. Hard water can cause many costly and nuisance problems. When hard water is heated up it causes scaling, which is precipitation of minerals (mainly calcium carbonate) to form hard deposit called limescale. Problems caused by scaling include: reduced efficiency of boilers, kettles, heat exchanger and other equipment; reduced or blocked flow to fixtures or appliances; unsightly spots on surfaces in the bathroom or on dishes.



New!

The conventional solution

The "classical" water-softening unit on the basis of ion exchangers exchanges calcium and magnesium ions in water with an equivalent amount of sodium. The result is not only soft water, but also increased sodium content (sodium in water increases blood pressure and has been determined to be harmful to the cardiovascular system by medical professionals). When the ion exchanger is depleted, it must be regenerated using saline solution. As an example, in order to regenerate 100 liters of softening resin, up to 25 kg of salt per regeneration cycle is required.

This means that significant expenses are incurred for each and every regeneration cycle.

CWG SCALE PROTECT

THE INNOVATION

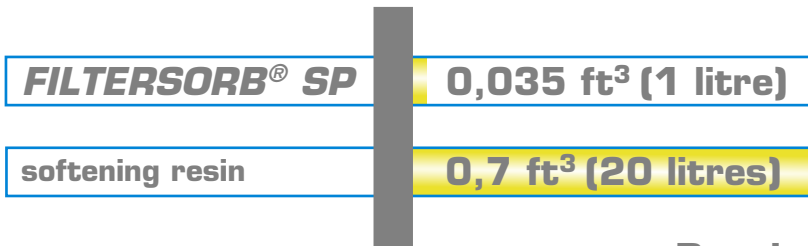
CWG has developed a totally new filter media for scale removal and scale protection for pipes and equipment for drinking water and industrial water systems.

CWG SCALE PROTECT FILTER with FILTERSORB® SP

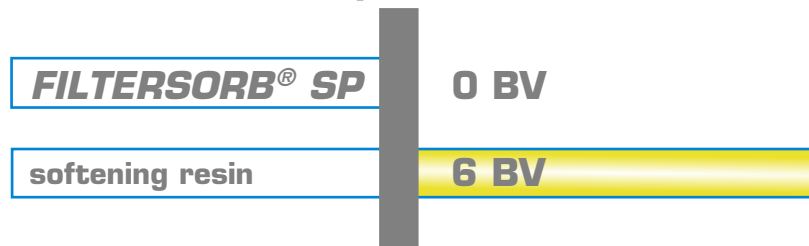
FILTERSORB® SP is a catalytically working filter media and has been developed by CWG to remove first the already existing scale from pipes and heat exchanger surfaces (descaling effect) and further on to protect the system from future formation of scale (Scale protection effect).

FILTERSORB® SP is based on a completely new technology. In this process atoms are placed in a special structure so that an active surface is created. This technology is so effective that it requires only a few seconds contact time. **FILTERSORB® SP** transforms the dissolved calcium carbonate (temporary hardness) into non-charged, neutral chemical bonds. These bonds are completely stable and cannot attach to any surfaces. The chemical bonds are rinsed away by the water flow. The size of the bonds is so small (in the range of nanometer) that they can only be seen with a microscope. Therefore the effect is the same as if the water was free of temporary hardness (calcium carbonate). The crystals are heat resistant and do not fall apart.

Required volume to treat 4,4 gpm (1 m³/h)



Required backwash volume



System dimensions	Peak flow in gpm	Service flow in gpm
8x35	9 gpm	7 gpm
9x35	11 gpm	9 gpm
10x54	15 gpm	13 gpm
13x54	26 gpm	22 gpm
16x65	44 gpm	40 gpm
21x60	75 gpm	66 gpm

CWG SCALE PROTECT

Tests with commercial coffee machines showed that those with water from CWG SCALE PROTECT FILTER were much cleaner after a short time of use than the control systems which were cleaned monthly.

CWG SCALE PROTECT FILTER work also great in front of RO membranes. It keeps the membranes from clogging with calcium carbonate.

A preexisting membrane's efficiency is improved after only 10 days, if calcium carbonate was the reason for the blocking.

No operating costs

The media is used in an up flow system, therefore only an in-out valve is needed. CWG SCALE PROTECT FILTER do not create any operational expenses, as **FILTERSORB® SP** does neither require backwash, regeneration or the use of any chemicals.

Mfg. AquaCera - Brooklyn, MI 49230. Doulton USA is master USA distributor of filtration systems using CWG Filtersorb SP media.
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