

The state-of-the-art

Scale Prevention

Watch[®] Systems



Scale Prevention

No Chemicals

Maintenance Free

100% Environmentally
Friendly

Cost Efficient

100% Effective
Certified



Short Overview of Old Systems

Which methods were used for scale prevention in pipes and heat conductors?



Old Systems

- Ion exchange resins
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- Dosage Systems
-

- Electronic or magnetic fields

- High upkeep costs
 - Damages environment
-

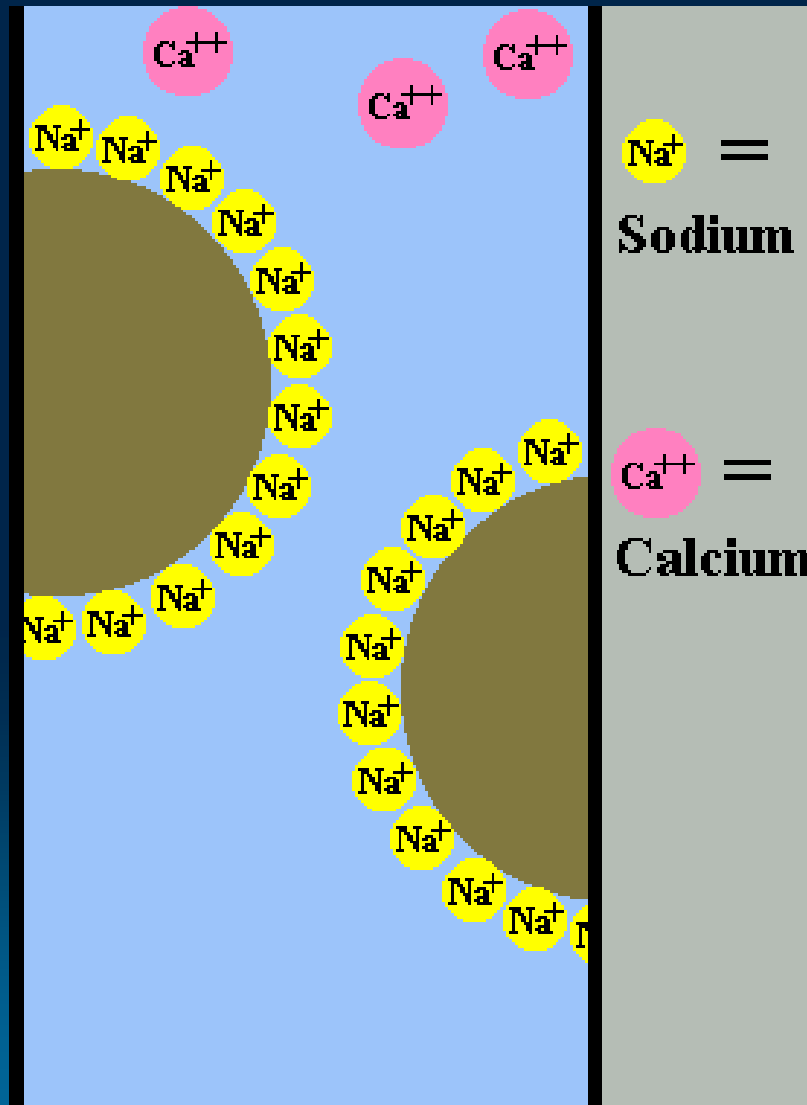
- Danger of over- or underdosage
 - Regular Maintenance
-

- Degree of efficiency is constantly changing



How do ion exchange resins work?

The scale causing
Ca and Mg
are removed
from the
water



Sodium
(Na)
is emitted to
the water

Disadvantages of **ion exchange resins**

- Large amounts of salt are needed for the regeneration.
- Faulty control valves
- Healthy Ca + Mg are removed from the water
- The sodium content of the water is raised.
- Every regeneration requires large amounts of fresh water.
- **Cost and storage problem**
- **High maintenance costs**
- **Bone growth / Osteoporosis**
- **Doctors warn about blood pressure raising effects**
- **Produces salty wastewater.**



How do the electro magnetic systems work?

The functionality of the system is scientifically questionable, not very reproducible, very dependant on the water quality and oftentimes seems esoteric.

Every installation is an experiment with an unknown result because **50 - 70%** of the systems **do not work**.

High **rates of reclamations** with **compensation claims**.



**What advantages do the Watch ®
Soft-NOR systems offer?**

and

how do they work?



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SOFT NO R

- **Complete scale prevention in all pipes and heat exchangers.**
- **100% removal of old calcium deposits.**
- **Formation of a layer for corrosion prevention.**



SOFT NO R Phase 1

The media works with a catalytic surface. Once water contact occurs the nanocrystals on the ceramic surface of the media create calcium crystals from the positive calcium ions. These calcium crystals are neutral and can not attach to any surfaces. This applies to pipes as well as machinery surfaces. This works with cold water as well as with hot water. The nano sized crystals are rinsed away by the water flow. All harmful characteristics of the calcium are neutralized. The important health advantages of the calcium and magnesium remain intact because the crystals dissolve at a pH of 3 and are then available to the body.



SOFT NO R Phase 2

Removal of existing calcium deposits.

The calcium crystals which are rinsed away by the water can not attach to any surfaces. But due to the nano structure of the crystals they have a similar function to the SOFT NO R Media. It binds additional calcium to itself and therefore breaks the grid structure of the calcium deposits. The result is that even after a short time large pieces of deposits are removed. This process continues until the surface is free from deposits.



SOFT NO R Phase 3

Formation of a corrosion preventing layer

After the old calcium deposits are removed a 30 to 80 micron thick corrosion preventing layer is formed. This layer forms because of the reaction of the nano surface of the crystals and the metallic surface of the pipes. This is comparable to the green layer of verdigris on a copper roof. As soon as the protective layer is formed it can no longer grow bigger, but it creates complete protection.



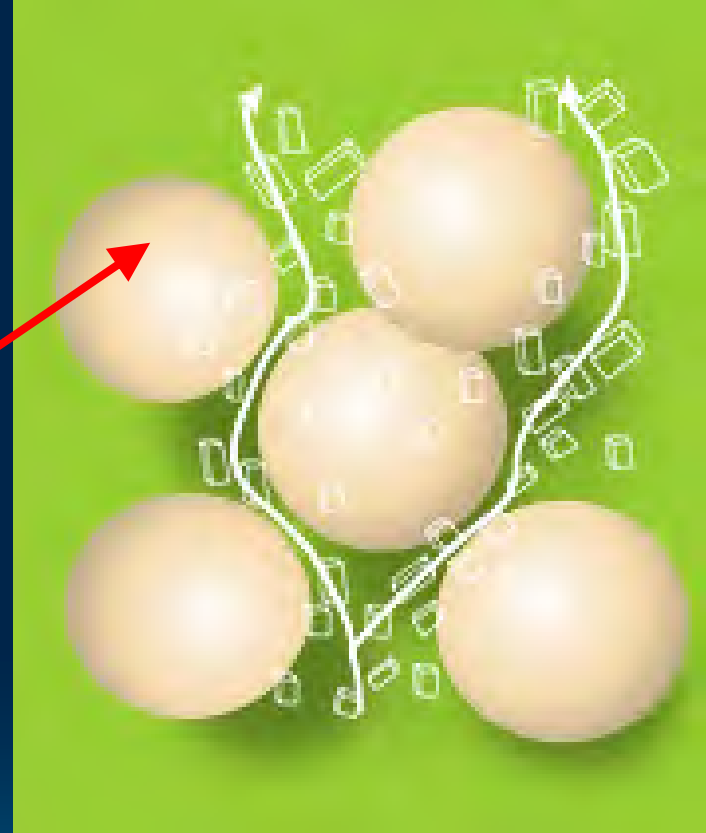
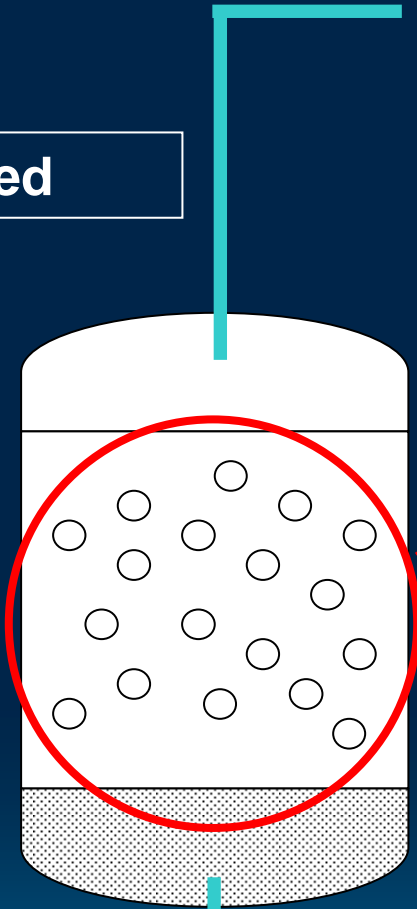
Advantages of the **Watch Soft-NOR** System

- **Low acquisition costs**
- **Minimal installation efforts**
- **No working expenses, no chemicals**
- **No maintenance costs**
- **No water usage, no wastewater**
- **Small space requirements**



How do the Soft-NOR systems work ?

Fluidized Bed



Formation of calcium crystals of nm size.



Example from the field.

Dismantling of the calcium deposits in the washing chamber of a large airconditioning system. Here the air is moistened with water.



Calcium deposits before the installation of a Soft No R System



Scale prevention in an airconditioner



About 6 weeks after the installation of the Soft-NOR system the calcium deposits in the washing chamber were completely removed.



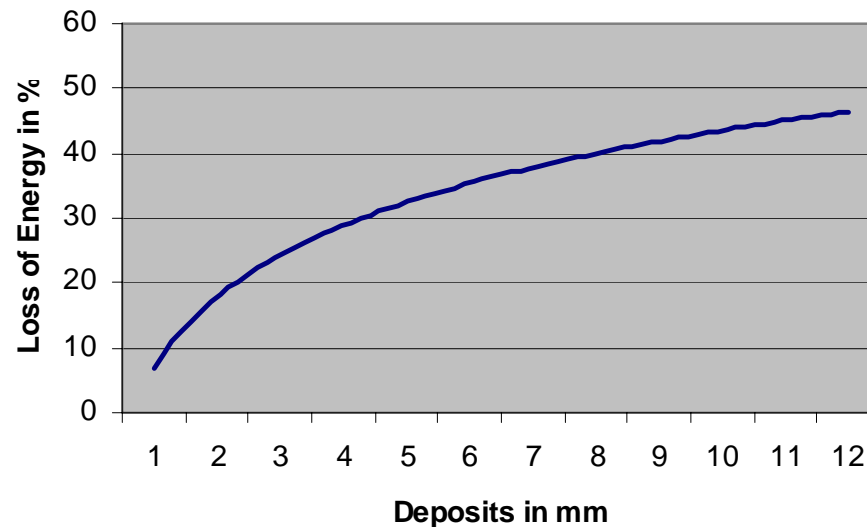
Advantages of the **Watch Soft-NOR** System

- Low initial investment
- No maintenance
- No salt costs
- No salt storage costs
- No movable parts
- No electricity
- No chemicals
- No regeneration
- No bacteria growth
- Little space requirements
- No need for water
- Low installation effort
- Saves energy costs
- Cost savings due to less repair of washing-, rinsing-, ice- and coffee-machines
- 50% savings of detergents
- No repair costs for corroded pipes and heat exchangers
- No costs due to the replacement of shower heads with scale.
- Advantageous beauty effects for hair and skin.



SOFT NO R

- Calcium – it wastes money and energy. Even with a 1mm thick layer of calcium on a heating element the costs of energy are increased by 10%. At 10mm it is already 40%. Don't waste your money.



SOFT NO R

- Calcium – and incrustations are dangerous hotbeds for legionella and other germs. Save energy costs and at the same time get more hygiene and germ prevention.

