



Softazur™ C

Softening drinking water
 Catalytic “fluidised reactor”
 } Gyrazur® technology
 } Drinking water



Gyrazur® is a product that combines compactness and comprehensive hardness reduction

Gyrazur® is part of the Softazur solutions™ for softening drinking water. The process is a fluidized-up flow reactor, where the softening takes place by a controlled precipitation of calcium carbonate on a support material consisting of sand / lime particles.

It is particularly suitable for treating water with high hardness and low content of organic and suspended matter. The compactness allows for easy integration into existing plants.

Gyrazur® technology ...

Gyrazur® is built up of one or more cylindrical reactor parts with an increasing diameter from top to bottom.

The total reactor consists of one mixing chamber (A), a reaction zone (B) and a separation zone (C). The water to be treated, circulates from bottom to the top. Reagents (sodium hydroxide (soda) or lime) can be dosed into the mixing chamber, to initiate the formation of lime crystals (precipitated calcium carbonate).

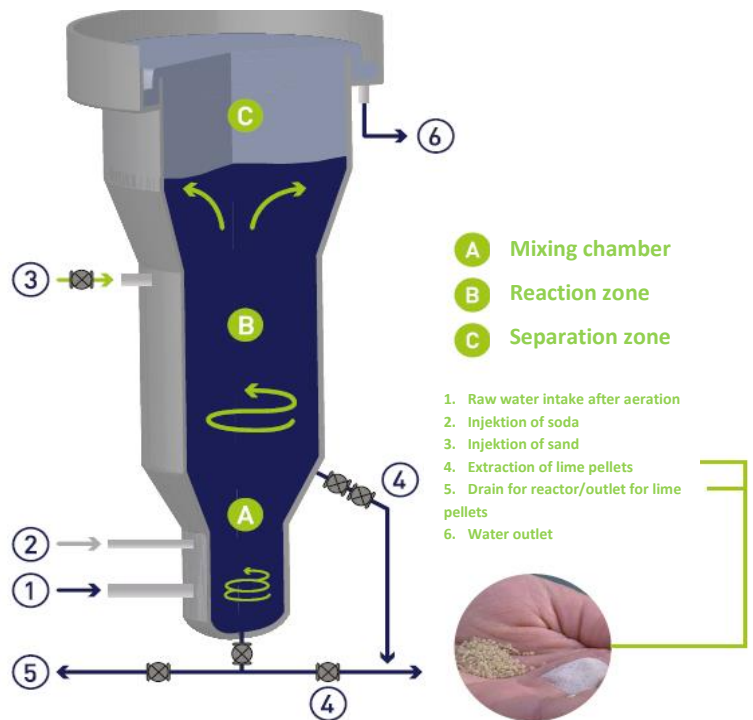
The upward flowing water forms a helical motion, that optimises mixing.

To accelerate the precipitation of calcium carbonate in the reaction zone, grains of sand are injected to form a “catalysing mass” whereupon the “limestone” gradually accumulates on the surface. Forming beads that easily precipitates.

The fluidizing effect created by the upward flow keeps the growing bed of “lime beads” fluidized in the reaction zone.

At the top of the structure, the softened water is diverted. The mass of “lime beads” is extracted by mechanical extraction and can then be reused in industry or agriculture.

Process scheme



Gyrazur® is ...

Easy to maintain and has a small footprint

Gyrazur® is a compact product that ensures efficient establishment on existing facilities. The process requires low maintenance (the amount of mechanical equipment is limited).

Safe treatment

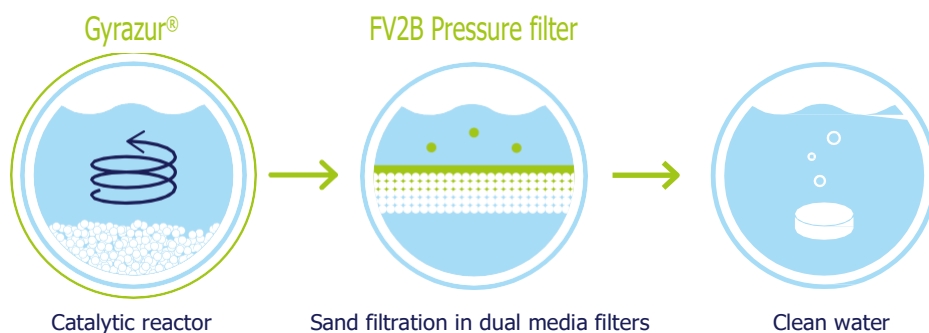
Gyrazur® is a catalysed process and the reaction ensures a complete separation of the precipitate with a very high-rise speed (speed 60-80 m/h).

Reuseable lime beads

Gyrazur® produces lime beads 1 to 2 mm in diameter that do not require dewatering.

Gyrazur® in the water purification process

→ Ground water



References for Gyrazur®



Ansereuilles, France
3 000 - 4 000 m³/h

- } Treatment of water from 26 wells.
- } Softening

Sludge
Reused in the construction industry



Chen Chin Lake, Taiwan
18 000 m³/h

- } Surface water treatment.
- } Softening with soda.

Sludge
Industrial reuse