

# FILTERSORB SP3

Anti-Scale Media



The Solution

## System Design SP3

Accurate system design with **FILTERSORB<sup>(R)</sup> SP3** is absolute easy and not critical.

To achieve the best productivity only four factors have to be observed. The goal of the designer of **FILTERSORB<sup>(R)</sup> SP3** system is to ensure that the correct water quality and capacity is delivered.

The optimum design depends on the relative importance of these parameters.

Each of them are described in the following sections:

### UP FLOW / COUNTERFLOW SYSTEMS

As the system needs no regeneration it can always flow in up flow direction, resulting it needs also no chemicals, no backwashing, improves water quality. And without any waster water compared to traditional water softeners. Contamination of **FILTERSORB<sup>(R)</sup> SP3** is zero compared to traditional water softeners. Counter flow systems are the simplest systems where the resin is in the same direction as the service flow (upflow). The service has a very large freeboard to allow as less as possible contact time 3 to 5 seconds max. **FILTERSORB<sup>(R)</sup> SP3** media will produce water of much higher quality than any ion exchange resin for softening **FILTERSORB<sup>(R)</sup> SP3** is a uniform media and a trademark of **WATCH<sup>(R)</sup> WATER Germany**. **FILTERSORB<sup>(R)</sup> SP3** is used as a single media for Antiscaling and Descaling. **FILTERSORB<sup>(R)</sup> SP3** prefers to treet both water with temporary hardness as well as permanent hardness.

### Recommended Operating Conditions

<b>Service Flow rate</b>	60 - 250m/h
<b>Temperature</b>	10°C - 90°C
<b>pH range</b>	6 - 8,5
<b>shiping weight</b>	

### Package

<b>60 liter</b>	in drums
<b>200 liter</b>	in drums



# FILTERSORB SP3

Anti-Scale Media



## System Design SP3

Sodiumleakage (NA)	None
H <sub>2</sub> SO <sub>4</sub>	None
CaCO <sub>3</sub> + MgCO <sub>3</sub>	None
Hydrogen (H <sup>+</sup> )	None
Sodium Hydroxide (NaOH)	None

<b>a)</b>	Pressure Vessel Sizing
<b>b)</b>	Distributor Systems
<b>c)</b>	Valves / Heads adapters
<b>d)</b>	FILTERSORB SP3 Quantity /m <sup>3</sup>
<b>e)</b>	Chlorine Removal / Copper instructions

Pressure Vessels should be made from typical well-known materials such as fiberglass. The Pressure vessels should have vortex systems . Pressure Vessel sizing should be adjusted to allow, that there is no FILTERSORB visible in the glass head or flow meter / is advisable or flow control.

All FILTERSORB SP3 system flow less than 1m<sup>3</sup>/h (226g gph) does not need above recommendations. Cartridge filled with

200ml of FILTERSORB SP3 flows	200	lit	/h
500ml of FILTERSORB SP3 flows	500	lit	/h
1liter of resin in cartridge with	1000	liter	/h

system can be designed upflow as well as downflow.

1liter of resin in cartridge with 1000liter /h



# FILTERSORB SP3

## Anti-Scale Media



**The Solution**

### **Distributor**

2x pictures right side

available from watchwater gives the best distribution of fluids during all phases of the operation. For this reason it is recommended.

It is advisable to install glass inlet - outlet / upflow tank adapter in order to check that FILTERSORB SP3 is not running fast and not blocking the TOP Distributer.

The design of the vessel should give a maximum flow, while limiting to settle the FILTERSORB SP3 on TOP distributor. The optimum flow must be a balance between the FILTERSORB SP3 and Pressure Vessel height and velocity best results achieved with 150 up to 200 BV (Bed Volumes)

### **Chlorine Removal**

The decision to install an activated carbon filter is not economic removing chlorine before it vdsdfd the FILTERSORB SP3 will increase the life of FILTERSORB SP3 but a little addition of Chlorinesorb will eliminate the activated carbon filter and this should be much more economical in layer systems if the chlorine as more the 3 ppm installation of Chlorinesorb unit is easier and, the pay-back time of chlorinesorb system should be short.

Note: For systems having chlorine levels up to 2ppm in inlet water does not need any Activated Carbon or Chlorinsorb.

