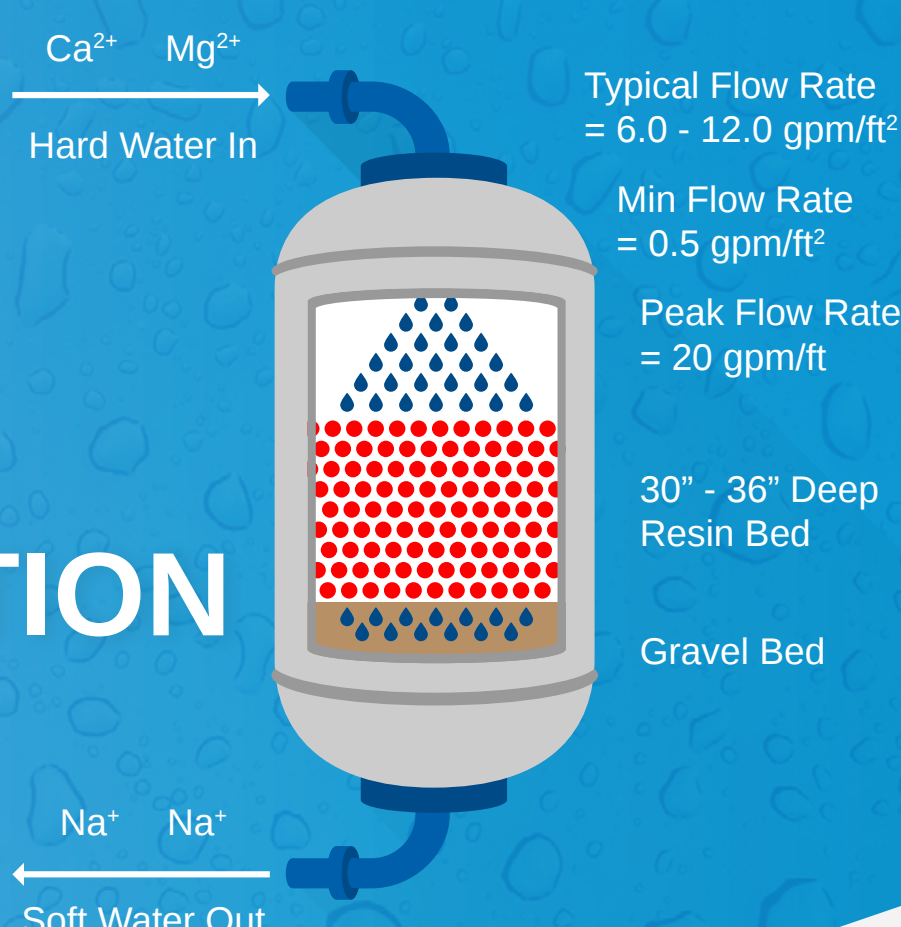


4

STEPS TO SOFTENER REGENERATION

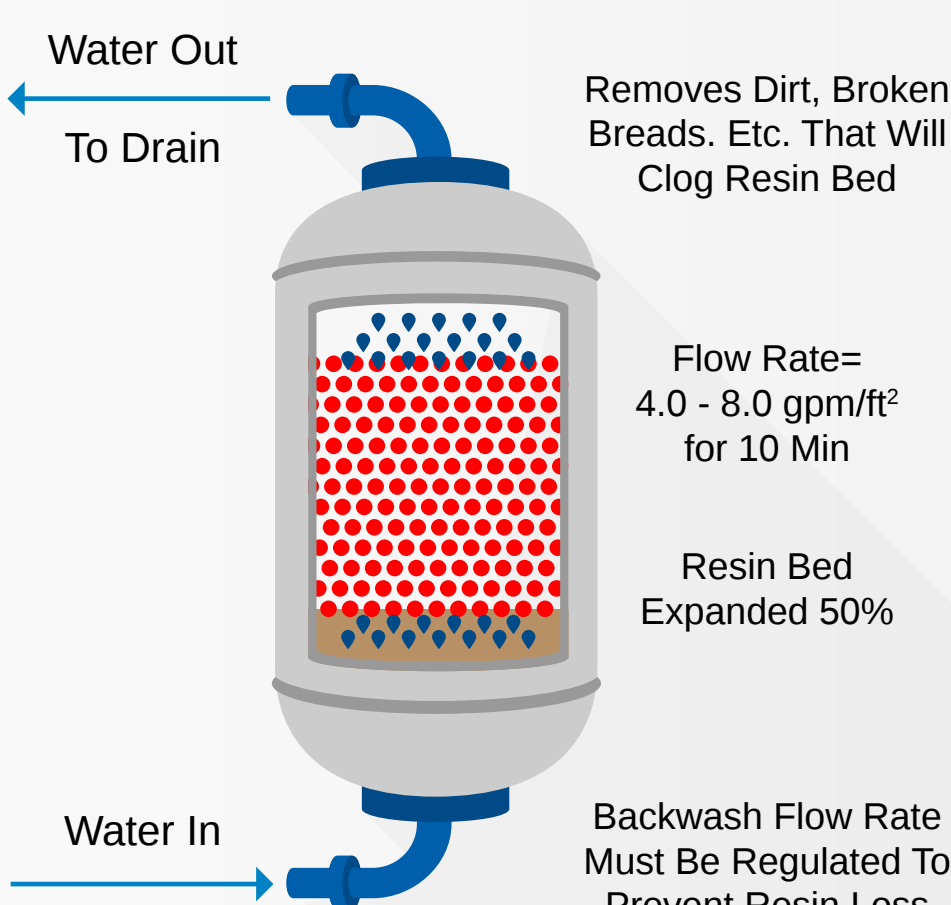
In the softening process, calcium and magnesium hardness ions in the raw water are exchanged for sodium ions. Once the softener reaches capacity, the regeneration consists of four basic steps.



1

BACKWASH

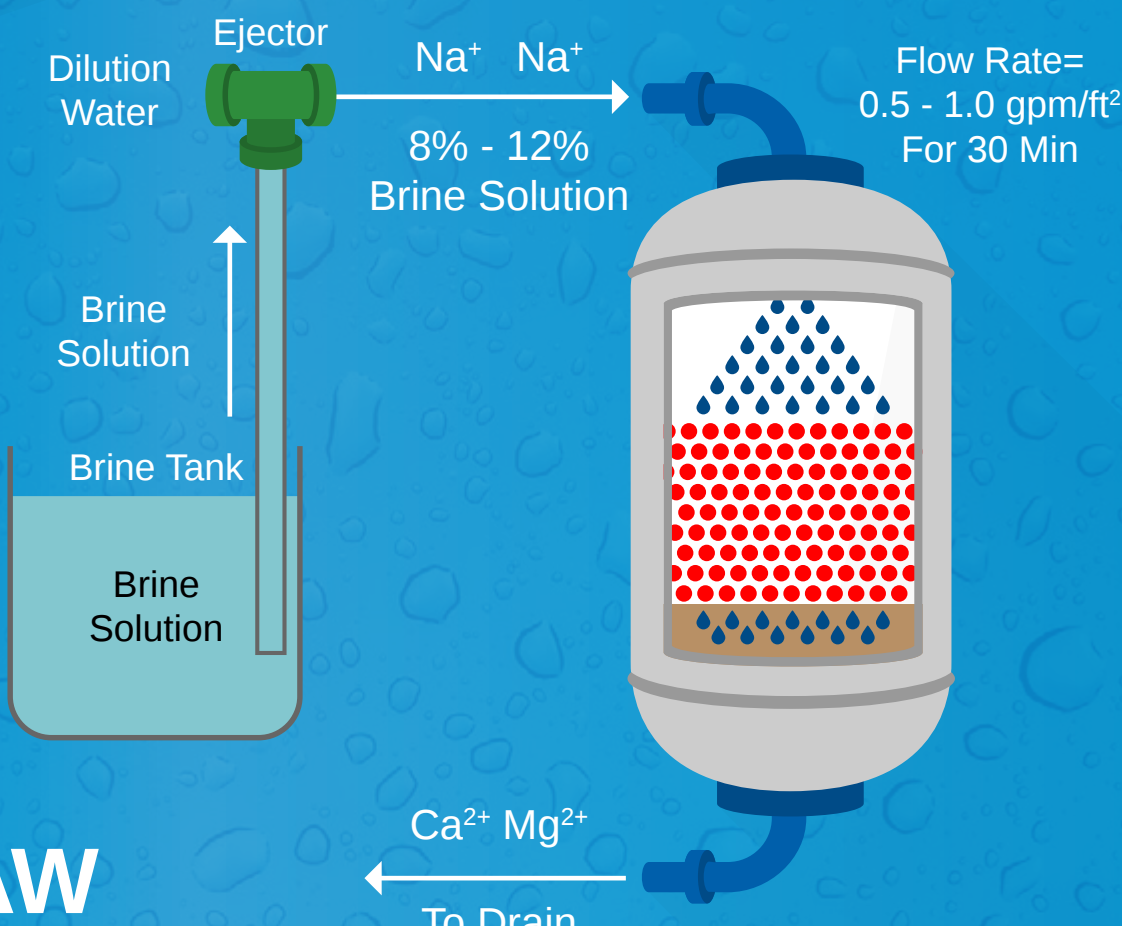
To remove the accumulated suspended solids in the resin bed, water flow is directed to the bottom of the tank, up through the resin bed, and out the top to the drain. This process expands the bed, flushes out suspended solids, and prepares the bed for brine draw.



2

BRINE DRAW

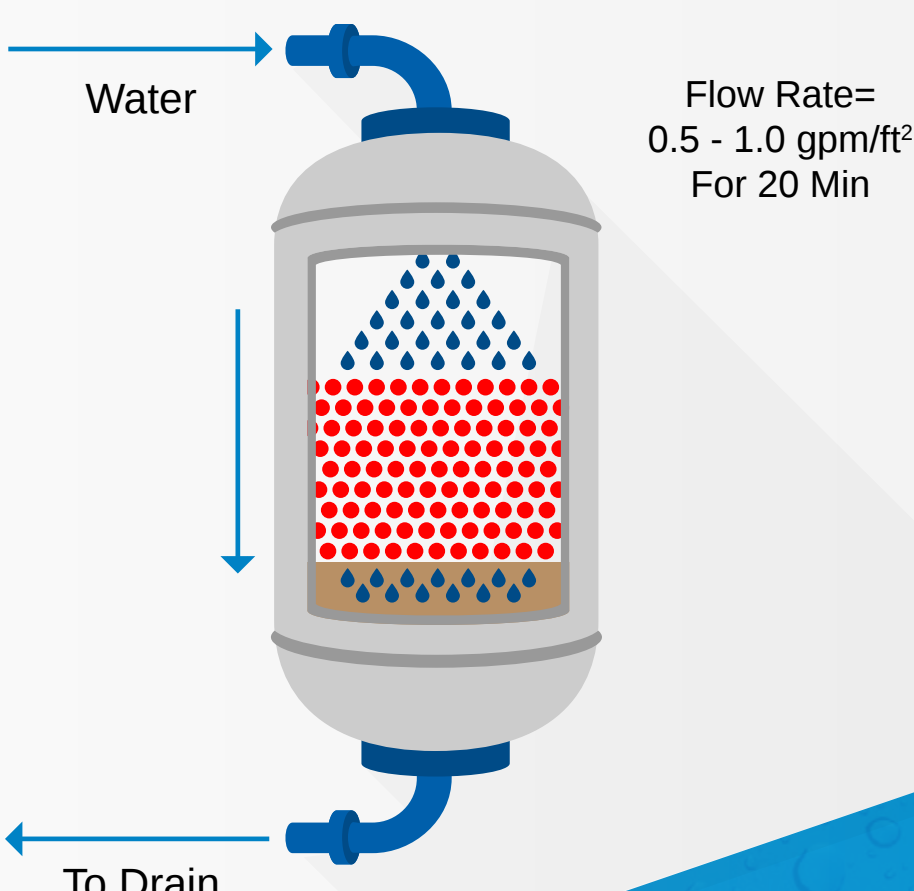
When backwash is complete, an approximately 8-12% brine solution is directed to the top of the resin bed. As the brine flows downward through the resin bed, the hardness ions attached to the resin are exchanged for sodium ions.



3

SLOW RINSE

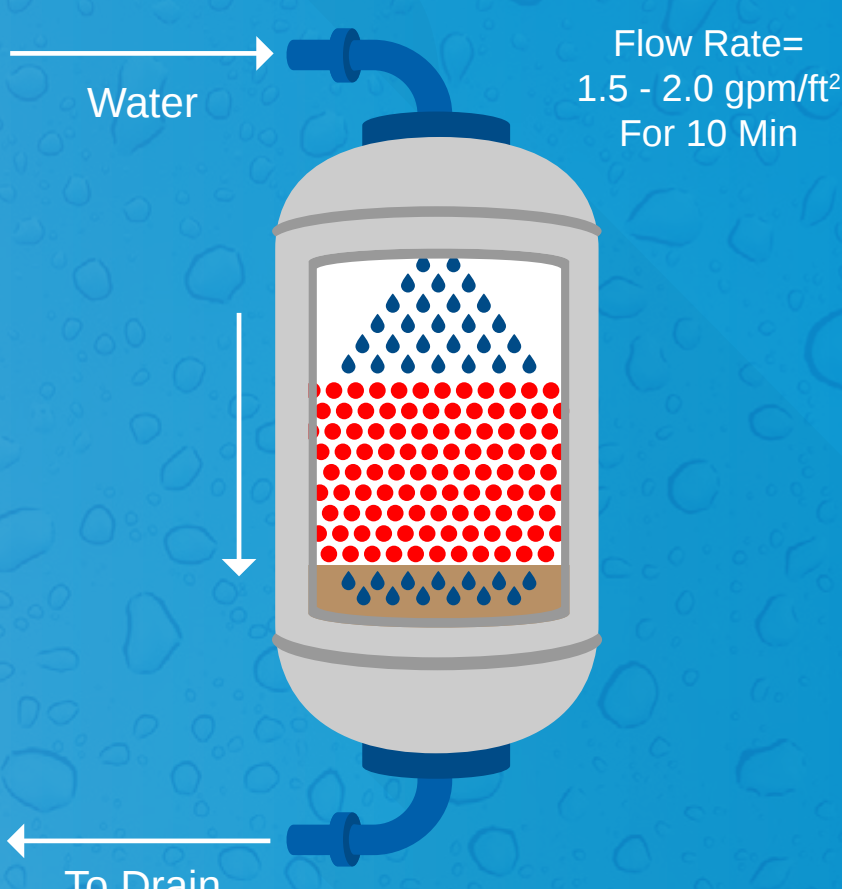
When the brine draw is complete, fresh water continues to be directed slowly through the resin bed, completing the ion exchange process and pushing the brine from the resin bed to the drain.



4

FAST RINSE

When slow rinse is complete, a fast rinse is directed to the top of the resin bed and through to the drain, flushing the remaining hardness and brine from the resin bed.



In a typical system after completion of the fast rinse step, water is then directed into the salt-filled brine tank so the proper amount of brine is available for the next regeneration. When brine-tank refill is complete, the softener is ready to return to service.