

Neutralizing Filters

Acidic water is not desirable since it causes corrosion, leaching of copper from piping and green-blue stains on fixtures. The presence of dissolved carbon dioxide (CO₂) increases acidity, while the increase in bicarbonate levels increases alkalinity. Acidity and alkalinity levels are measured by the pH scale, which ranges from 0 (very acidic) to 14 (very alkaline), with 7.0 being the neutral value. pH value can be easily measured using a test strip. If the pH of your water is below 6.8 then it should be neutralized using a neutralizing filter.

The idea behind a neutralizing filter is simple: an alkaline material (usually calcium carbonate or lime) is added to balance acidity. Lime dissolves over time and raises the pH of water to be close to neutrality. Lime media normally last several years, yet the depletion rate depends on the acidity of water and rate of water use. Some neutralizing filters look like softeners and may incorporate automatic backwash systems to clean the lime bed and avoid compaction of media.

Because calcium carbonate is added to neutralize acidic water, hardness levels may increase. In such cases a water softener is installed after the neutralizing filter to remove hardness (calcium) and reduce the possibility of scale formation.

pH = 0	battery acid, strong hydrofluoric acid
pH = 1	hydrochloric acid secreted by stomach lining
pH = 2	lemon juice, gastric acid, vinegar
pH = 3	grapefruit, orange juice, soda
pH = 4	tomato juice, acid rain
pH = 5	soft drinking water, black coffee
pH = 6	urine, saliva
pH = 7	"pure" water
pH = 8	sea water
pH = 9	baking soda
pH = 10	Great Salt Lake, milk of magnesia
pH = 11	ammonia solution
pH = 12	soapy water
pH = 13	bleaches, oven cleaner
pH = 14	liquid drain cleaner

The pH scale and examples of typical materials



A pH neutralizing filter system