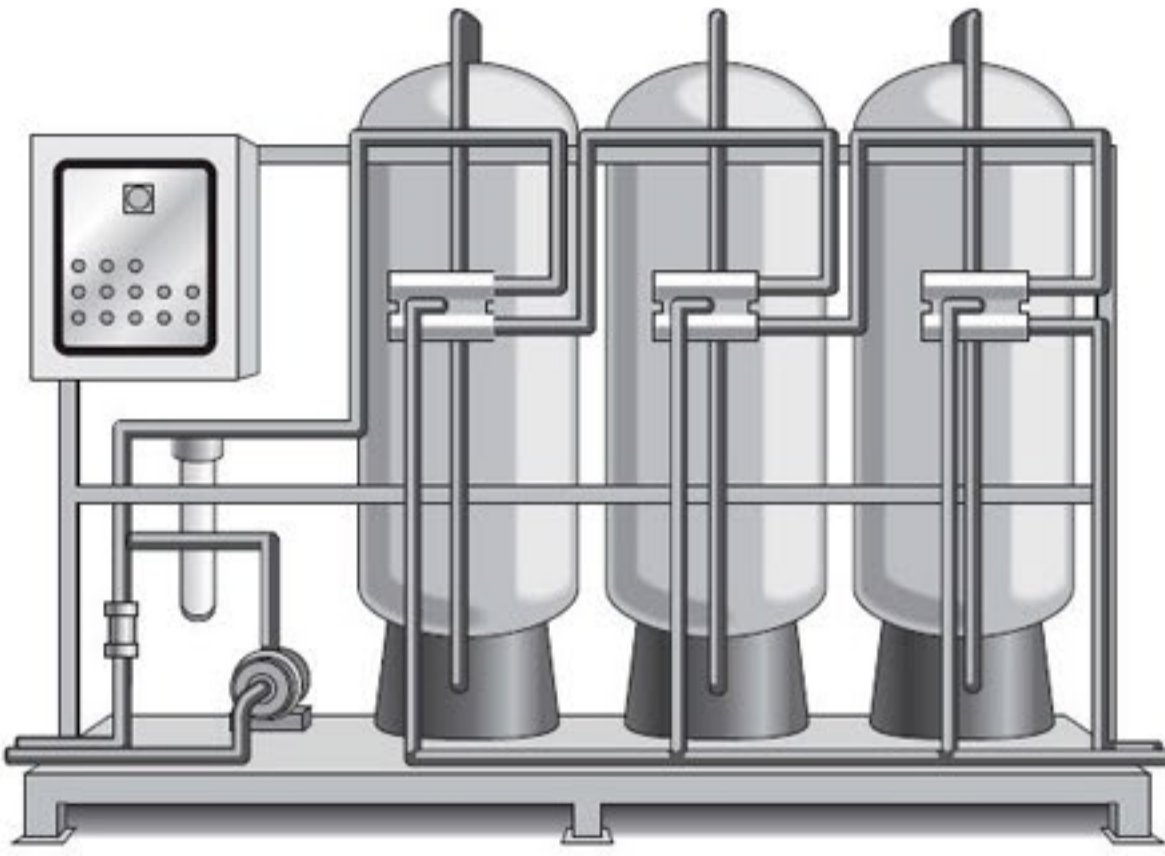


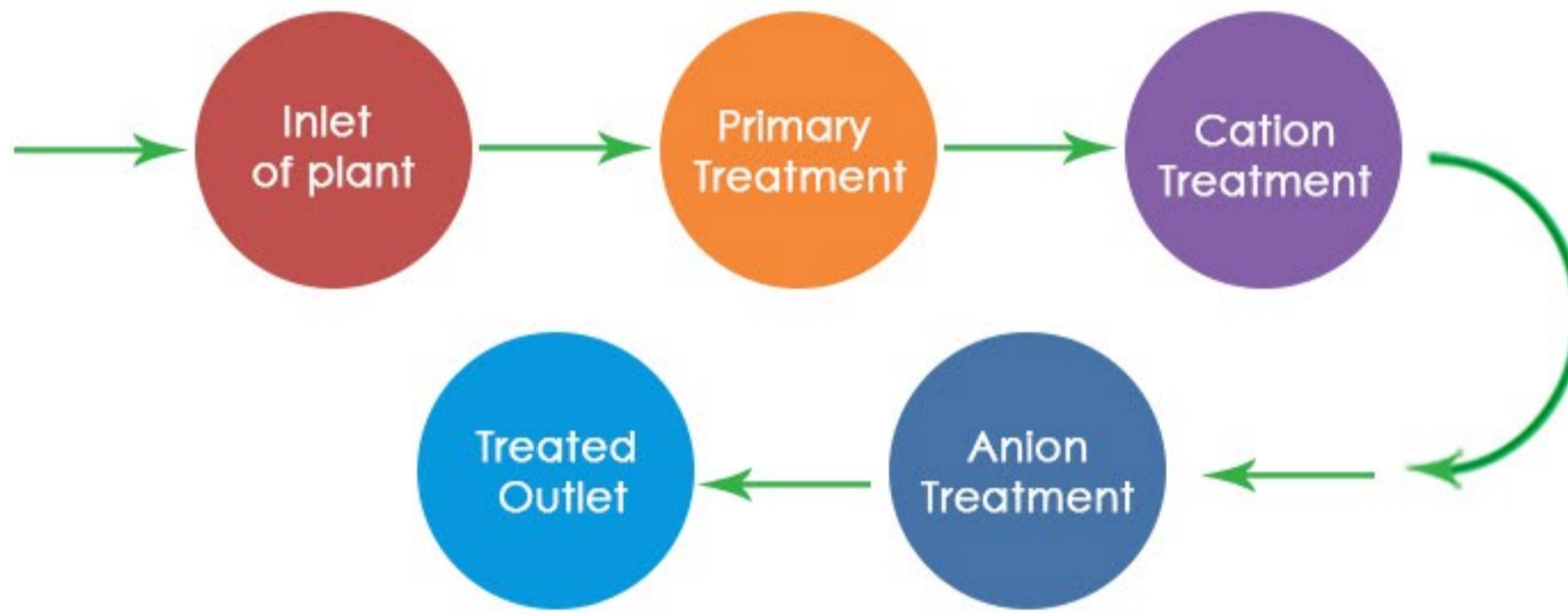


U. S. AQUATREAT CO.

## DE-MINERALIZATION PLANTS



### Process Flow Diagram:



### Process Description :

Demineralization is the process of removing mineral salts from water by using the ion exchange process. Deionization is a physical process which uses specially-manufactured ion exchange resins which provides ion exchange site for the replacement of the mineral salts in water with water forming  $H^+$  and  $OH^-$  ions. Because the majority of water impurities are dissolved salts, deionization produces a high purity water that is generally similar to distilled water.

Water flows through the cation column, whereupon all the cations are exchanged for hydrogen ions. The same principle applies when considering anion-exchange. Water then flows through the anion column. This time, all the negatively charged ions are exchanged for hydroxide ions which then combine with the hydrogen ions to form water ( $H_2O$ ).

### Application:

- |                             |                             |                            |
|-----------------------------|-----------------------------|----------------------------|
| 1) Textile Industry         | 2) Food processing Industry | 3) Paper Industry          |
| 4) Chemical Industry        | 5) Solar cell Industry      | 6) Pharmaceutical Industry |
| 7) Automobile Industry      | 8) Rubber Industry          | 9) Sugar Industry          |
| 10) Steel Industry          | 11) Power Plant             | 12) Leather Industry       |
| 13) Hotel Industry          | 14) Fertilizers             | 15) Dairy product Industry |
| 16) Builders and Developers | 17) Agricultural Industry   | 18) Beverage Industry      |