

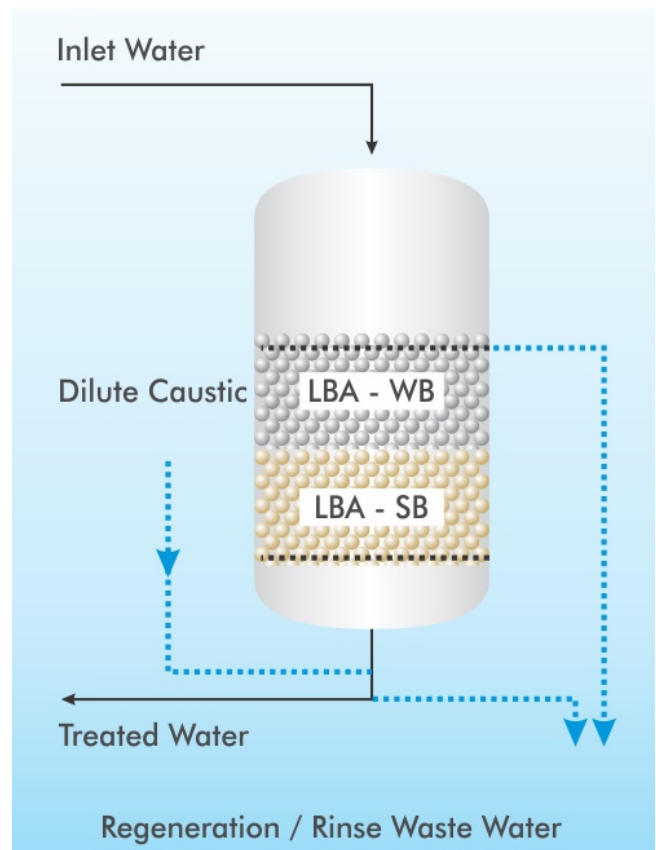
## **INDION®** Layered Bed Anion System

INDION Layered Bed Anion (LBA) unit is a single vessel system with layers of two resins, INDION LBA-WB on top of INDION LBA-SB with down flow service. The layered bed system provides high chemical efficiency of a two-bed weak base anion and strong base anion system in a single vessel. Thus, it saves the cost of additional vessel, associate piping and valves. The layered bed anion system is always regenerated counter currently. Fresh caustic solution first comes in contact with strong base anion bed & then passes through the weak base anion bed. This provides high chemical regeneration to the strong base anion resins, resulting in excellent treated water quality and optimal utilization of regenerant, making the system highly efficient.

Layered bed anion units are available in ASME and IEL Good Engineering Practices.

### Advantages

- Single vessel system resulting in:
  - Capital cost savings
  - Lower footprint
- High efficiency in chemical usage due to high throughput capacity
- Lower operating costs as compared to a conventional system
- Contemporary design and easy to retrofit in the existing system
- Lowest cost of production of demineralized water



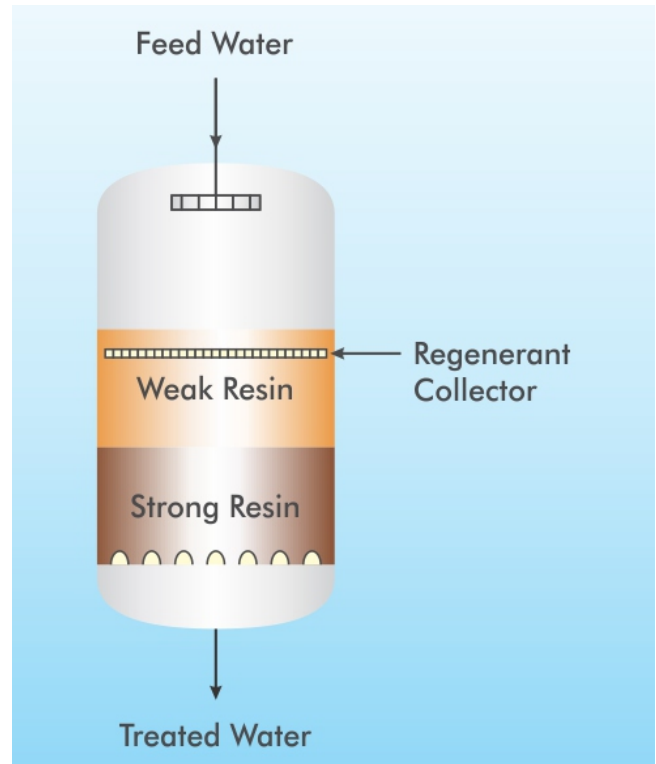
### Applications

- INDION LBA system is proven to be an excellent choice for all plants as substitute of two bed weak base and strong base anion system since it provides an optimum balance between investment and operating cost.
- INDION LBA system can be selected to treat water with low alkalinity when the system has no degasser unit and where EMA is typically greater than 60% of the total anions. It can be selected to treat all other water when the system has degasser unit especially if EMA is not too low.

# INDION® Layered Bed Cation System

INDION Layered Bed Cation unit is a single vessel system with layers of two resins. INDION weak acid cation resin is on top of INDION strong acid cation resin with down flow service. The layered bed system provides high chemical efficiency of a two bed weak acid cation and strong acid cation system in a single vessel. Thus, it saves the cost of additional vessel, associate piping and valves. The layered bed cation system is always regenerated counter currently. Fresh hydrochloric acid first comes in contact with the strong acid cation bed & then passes through the weak acid cation bed. This provides high chemical regeneration to the strong acid cation resins, resulting in excellent treated water quality and optimal utilization of regenerant, making the system highly efficient.

Layered bed cation units are available in ASME and IEL Good Engineering Practices.



## Advantages

- Single vessel system resulting in:
  - Capital cost savings
  - Lower footprint
- High efficiency in chemical usage due to high throughput capacity
- Lower operating costs as compared to a conventional system
- Contemporary design and easy to retrofit in the existing system
- Lowest cost of production of demineralized water

## Applications

- Layered bed cation is proven to be an excellent choice for all plants as substitute of two bed weak acid and strong acid cation system, since it provides an optimum balance between investment and operating cost.
- INDION layered bed cation system can be selected to treat water containing high proportion of alkaline salts in relation to neutral salts.

To the best of our knowledge, the information contained in this publication is accurate. Ion Exchange (India) Ltd. maintains a policy of continuous development and reserves the right to amend the information given herein without notice. Please contact our regional / branch offices for current product specifications.

**INDION®** is the registered trademark of Ion Exchange (India) Ltd.



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