



ION EXCHANGE

THE POWER
BEHIND WATER

(INDIA) LTD

Total Solutions for Rural Water Treatment

More precious than gold. That's what safe drinking water is to India's 700 million rural population. Arsenic, iron, fluoride, nitrate, brackishness and pathogens in ground water affect millions in rural India and in developing countries across the globe, causing severe health hazards. While the effects of these water contaminants can be reversed at an early stage, in the long term they can lead to serious diseases and, in some cases, even death.

Ion Exchange (India) Ltd. has developed cost-effective systems to treat contaminated water. These systems have been further adapted to fit onto handpumps, which are usually the source of drinking water in rural areas. They are also available as point-of-use and community level systems.



INDION® Fluoride/Iron/Nitrate/Arsenic Removal Systems



Arsenic Removal Handpump Attachment



Iron Removal Handpump Attachment



Point-of-use Defluoridation Unit



Fluoride Removal Powerpump Attachment

Features

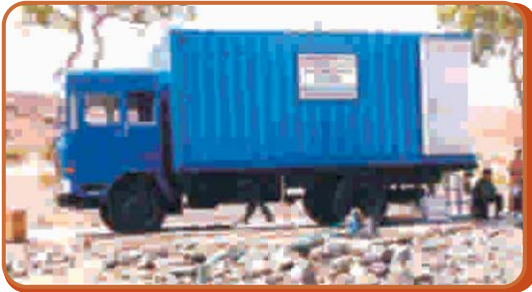
- Uses tubewell infrastructure
- Adaptable to remote locations
- Operates without electricity
- Compact, easy to use and maintain
- Reduces contaminants to WHO limits
- Effective over a wide range of influent water qualities
- Available as point-of-use, handpump & powerpump attachment, and community based units

Contaminant Removal Performance - Handpump Attachment

| Parameter | Specifications | | | |
|--|--|--------------------------------|-------------------------|-------------------------|
| | Arsenic | Iron | Fluoride | Nitrate |
| Media type | Arsenic Adsorption Media | INDION ISR | INDION FR-10 | INDION NSSR |
| Design flow rate liter/minute | 8–12 | 10–15 | 4–6 | 4–6 |
| Tubewell max. pumping rate liter/minute | 15 | 15 | 15 | 15 |
| Unit material of construction | Injection moulded PVC or ABS | Powder coated MS | PVC supported by MS | PVC supported by MS |
| Backwash frequency | Once in 14 days (site specific) | Once in 2 days (site specific) | ← During regeneration → | |
| Maximum influent contamination concentration | Up to 3.5 ppm of total arsenic & 15 ppm iron | Upto 10 ppm of iron | Upto 8 ppm of fluoride | Upto 120 ppm of nitrate |
| Reduces to | < 50 ppb | < 0.3 ppm | < 1.0 ppm | < 45 ppm as nitrate |
| Design pH range | 6–8 | 7–9 | 6–8 | 6–8 |

Note: The volume of treated water depends on influent water quality. Consult before use where water is microbiologically unsafe or of unknown quality.

INDION® Disaster Management Unit for Drinking Water



The INDION disaster management unit is a state-of-the-art containerised water treatment system specially designed to cater to emergency requirements of drinking water during natural calamities. Disasters such as floods, drought, cyclones and earthquakes result in highly contaminated water supply sources, leading to widespread waterborne diseases and epidemics. The INDION disaster management unit produces safe drinking water conforming to stringent IS 10500 standards.

Treatment

The INDION disaster management unit consists of ultrafiltration, reverse osmosis and ozonation modules which can be used in combination, depending on the quality of water to be treated. It is designed to produce 5000 litres per hour drinking water from any surface water supply having low (<200 ppm) total dissolved solids (TDS) and 2000 litres per hour from brackish water sources like ground water with TDS as high as 2000 ppm.

Ultrafiltration: This membrane based process removes all undissolved impurities including suspended solids, colloidal impurities, bacteria and viruses and a large number of organic compounds like pesticides and detergents.

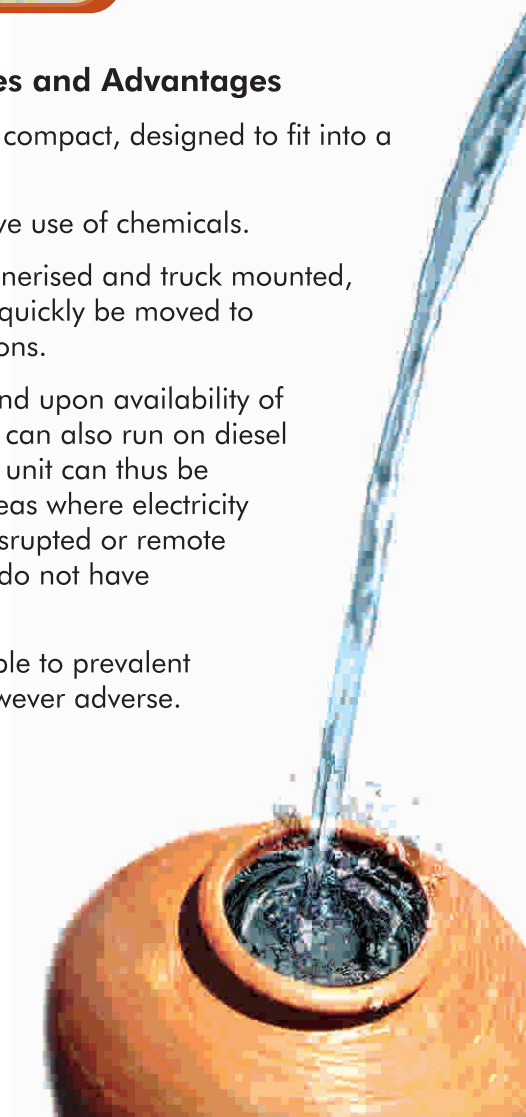
Reverse osmosis: This is a membrane based process which removes dissolved impurities (salts) from brackish water to produce potable water having low dissolved salts.

Ozonation: This consists of an ozone generator unit which produces ozone gas in situ and a mechanism which introduces it into water to kill all bacteria and inactive viruses.



Special Features and Advantages

- ☑ Skid mounted, compact, designed to fit into a container.
- ☑ Does not involve use of chemicals.
- ☑ Mobile. Containerised and truck mounted, it can easily & quickly be moved to different locations.
- ☑ Does not depend upon availability of electricity as it can also run on diesel generator. The unit can thus be operated in areas where electricity supplies are disrupted or remote villages which do not have electricity.
- ☑ Highly adaptable to prevalent conditions, however adverse.



INDION® Jalshudhi - Low-cost Drinking Water Purification

INDION Jalshudhi is a simple, convenient and ready-to-use product which purifies water giving 100% bacteria-free water and even eliminating E-coli. Moreover, it is able to settle suspended impurities and is therefore ideal for purifying muddy and turbid water. The residual purifying effect lasts several hours. The product has been successfully tested by Government approved laboratories.

Easily affordable, a 5 mg sachet can purify 20 litres of contaminated water with respect to bacteria and turbidity.



Specially developed for semi-urban and rural areas of developing countries, INDION Jalshudhi is also ideal for use during natural calamities such as floods, cyclones and earthquakes when water supplies get polluted with suspended solids, dirt and pathogenic bacteria as well as with faecal contamination. The use of INDION Jalshudhi during such disasters can help prevent the outbreak of waterborne diseases and epidemics. It is also ideal for use by the defence and police forces during wartime action/exercises in remote areas.

Also,



INDION®
Reverse Osmosis
for treating brackish
water

ZERO B® Srijal
Water purifier for homes
without tap connections



INDION® Easy Test Kit
Designed for on-the-spot
water analysis

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

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T o t a l W a t e r M a n a g e m e n t