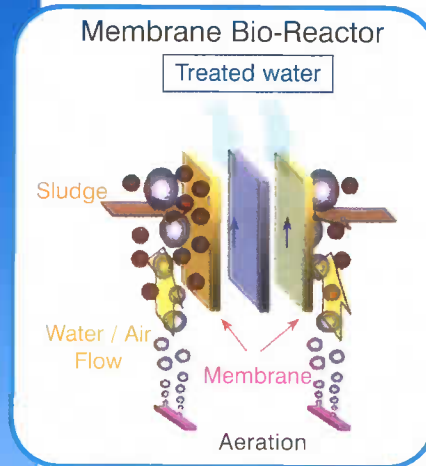


INDION® Membrane Bio-Reactor (MBR)



Process

INDION Membrane Bio-Reactor (MBR) is among the latest technologies in biological treatment, designed to produce high quality treated water from waste water with highest possible contaminant reduction without using any chemicals.

What makes the INDION MBR so successful is the effectiveness of the submerged membranes filtration in the biological process. It is this membrane treatment that produces high quality permeate from domestic sewage and industrial waste water. The submerged membranes used in the biological process remove suspended matter from activated sludge and provide stable and reliable unit with consistent performance.

Conventional System Vs. MBR

Conventional System 100%

INDION® MBR 25%

Biological Tank Volume

Features

- Single packaged unit with minimal civil construction
- Modular in construction and design
- Compact, requires 25% of a conventional system
- Low energy consumption (1.14 kwh/1000 gal) for filtration
- Upto 6 log (99.9999%) removal of total coliform
- No chemicals required during treatment

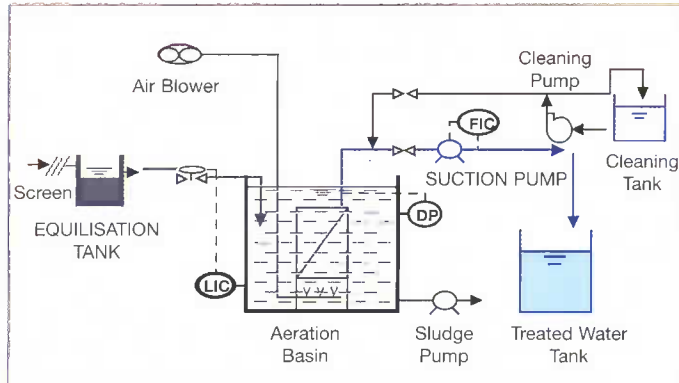
Advantages

- Minimum land usage
- Minimal power and chemical requirement
- Low operating cost

Applications

- Housing Complexes
- Townships
- Hotels
- Golf & Country Clubs
- Industrial Estates
- Industrial waste treatment
- Waste recycle
- Existing plant upgrade and/or capacity expansion

Typical Treatment Scheme



Treated Water Characteristics: (Domestic Effluent)

- BOD : < 2 ppm
- COD : < 20 ppm
- Turbidity : < 1 NTU
- NH₃N* : > 90% reduction
- P* : > 90% reduction
- Total Coliform : 99.9999% removal

* With appropriate biological design and/or chemical addition.

INDION MBR is also suitable for treating industrial effluents & the treated water characteristics may vary & can be established after piloting

Standard Module Specifications**

| Modules Model Name | | INDION TMR-140-50S | INDION TMR-140-100S | INDION TMR-140-200W | INDION TMR-140-200D |
|-------------------------------------|-------------------------|----------------------------|---------------------|---------------------|---------------------|
| Standard Flow (m ³ /day) | | 40-50 | 80-100 | 150-200 | 150-200 |
| Membrane material | | PVDF + PET non-woven fiber | | | |
| Housing Size | Width (mm) | 810 | 810 | 810 | 810 |
| | Length (mm) | 950 | 1620 | 3260 | 1620 |
| | Height (mm) | 2100 | 2100 | 2100 | 4160 |
| Weight (kg) dry membrane element | | 400 | 700 | 1430 | 1360 |
| Material | Housing | SS 304 | | | |
| | Permeate Water Manifold | PVC or SS 304 | | | |
| | Aeration Diffuser | SS 304 | | | |

** Primary specifications for domestic effluent, case specific for industrial effluents

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 offices for current product specifications.

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