

## Applications



Commercial Complex



Hotel



Hospital



Industry



Institute



IT Park



Laundry



Residential Colony

## A Better Choice

FEATURES	BENEFITS	
Attached growth process	No sludge recycle Low sludge production	No Monitoring of M.L.S.S.
High Bio-film surface area	High Bio-film surface area	Compact Plants
Fluidized bed	Non clogging design Reduces coliform Low maintenance	Better oxygen transfer efficiency Reduced power consumption Tank of any shape can be utilised

## Options Available

- Capacity - 10 KLD and above
- FAB with UltraFiltration (UF) system for recycling
- Prefabricated Units
- Civil Units
- Lo Flo Units
- Basement Installations
- Recycling for Gardening, Flushing, Car wash & Cooling towers
- Sludge handling - Filter press, Centrifuge, Sludge drying bed & Sludge holding tank



We reserve the right to amend any product details without notice



**THERMAX**

Sustainable Solutions in Energy & Environment

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Nigeria, Brazil, UK, USA

## Thermax Business Portfolio

Water & Waste Solutions

Air Pollution Control

Chemicals

Boilers & Heaters

Absorption Cooling

Power

September 2010 Edition



## Water & Waste Solutions

*for a cleaner & greener environment*



# FAB REACTOR

Waste Water Treatment Technology

**Improving your business is our business**

Thermax offers products, systems and solutions in energy and environment engineering to industrial and commercial establishments around the world. Its business expertise covers heating, cooling, waste heat recovery, captive power, water treatment & recycling, air pollution control & waste management and performance chemicals.

Thermax brings to customers extensive experience in industrial applications and expertise through technology partnerships and strategic alliances.

Operating from its headquarters in Pune (Western India), Thermax has built an international sales & service network spread over South East Asia, Middle East, Africa, Russia, UK and US. It has full fledged ISO 9001:2000 and ISO 14000 accredited manufacturing setup.

**Water & Waste Solutions Division**

offers expertise in water management recycling. Its water and waste water treatment systems support power plants, oil & gas installations, fertilisers, petrochemicals and others. Its waste management systems serve health and hospitality sectors, townships and colonies.

## Fluidized Aerobic Bio-Reactor



### Fluidized Aerobic Bio-Reactor (FAB)

FAB is a waste water treatment technology which acts as a better alternative to the conventional waste water treatment plants.

The conventional treatment plants are large sized, power intensive and require a lot of monitoring.

Scarcity of open space geographical network of piping, high power and land cost have made conventional systems obsolete. FAB serves as a great space saving and efficient treatment option.

### How it Works

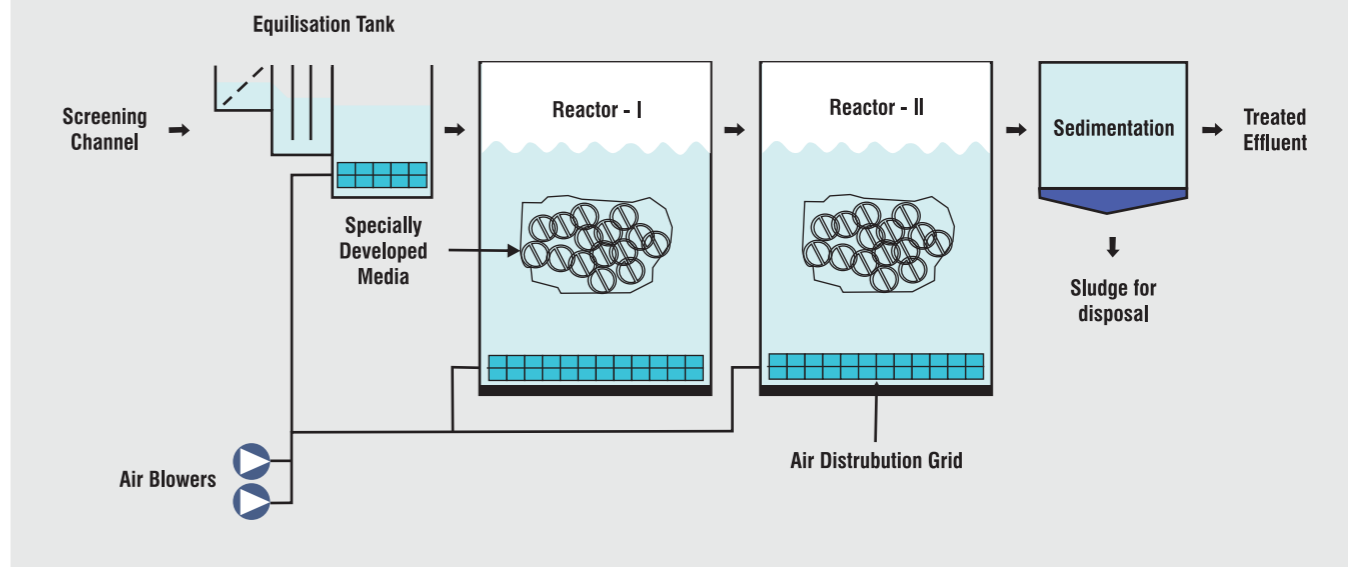
The FAB consists of a tank filled with specially developed media. These media are made of special material of suitable density, that can be fluidized using an aeration device through diffusers.

A bio-film develops on the media, which move along the effluent in the reactor. The movement within the reactor is generated by providing aeration with help of diffusers placed at the bottom of the reactor.

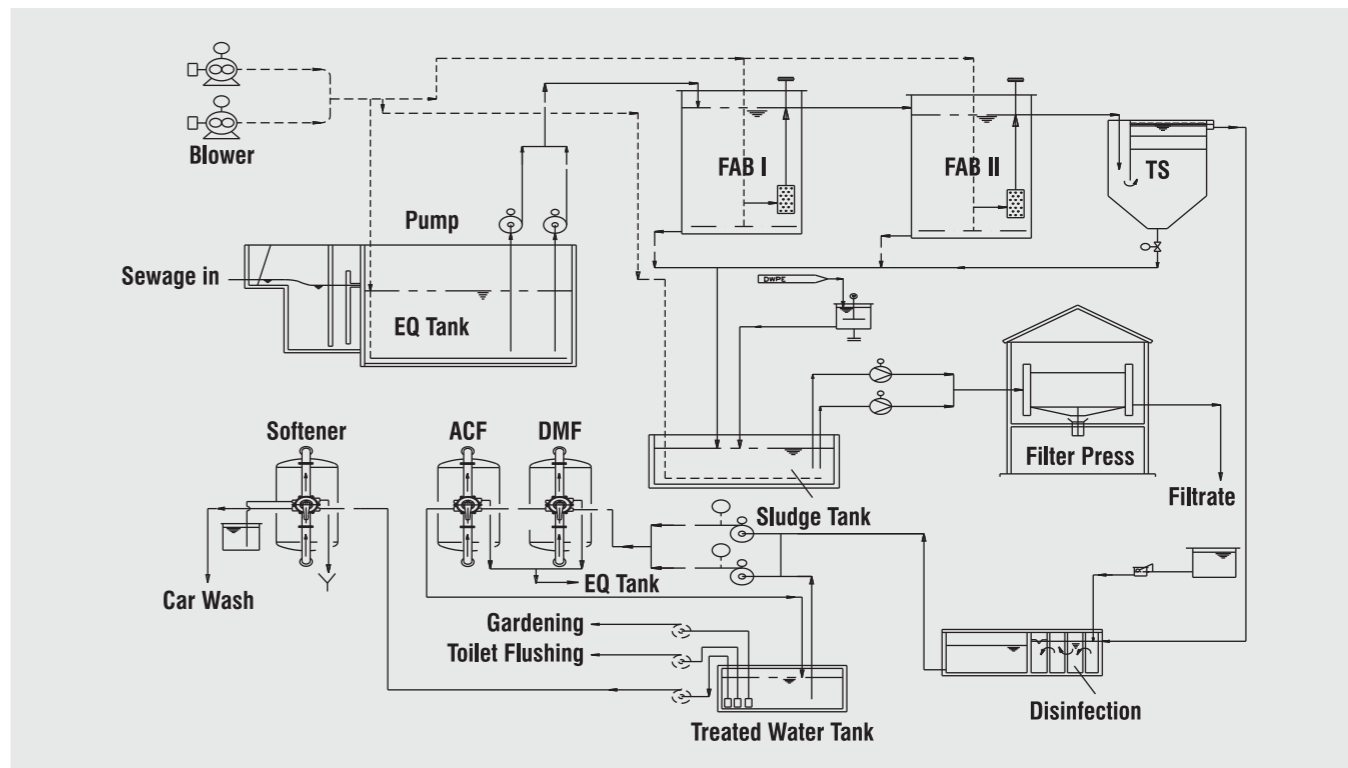
This thin film on the media enables the bacteria to act upon the bio-degradable matter in the effluent and reduce BOD/COD content in presence of oxygen from the air used for fluidization.

### Working Principle

#### Two Stage Fluidized Aerobic Bio-Reactor



### Typical Scheme



### Benefits

- Odourless operations, with a self-regulating system.
- High bio-film surface area : compact plants with high loading rates.
- Reduced power consumption.
- Non-clogging design, better oxygen transfer efficiency.
- Attached growth process - no sludge recycling, low sludge production, no monitoring of M.L.S.S.
- Removes E-Coli (Colliform).
- Simple to operate, with low maintenance requirements.

**Small Footprint Area**

