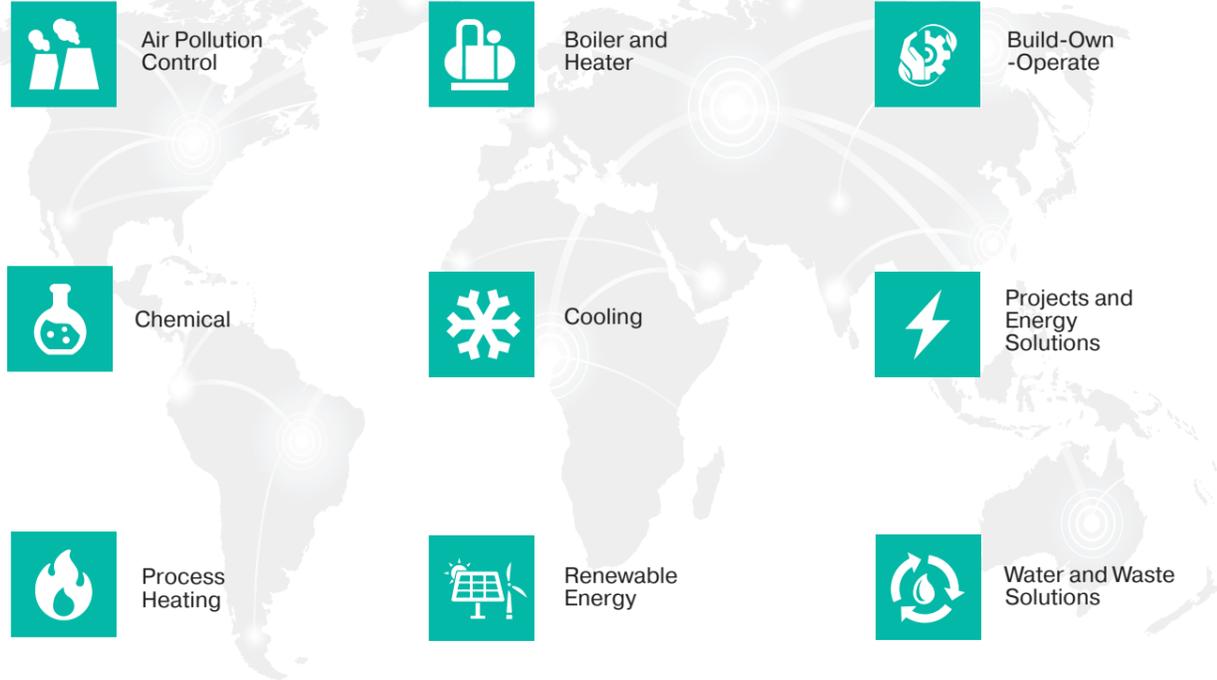


Conserving Resources,  
Preserving the Future.



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Water and Waste Solutions



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# Our Products

# Conserving Resources, Preserving the Future.

Thermax is a USD 750 million engineering major providing sustainable solutions in the areas of energy and environment. Spanning over 86 countries, clients make use of Thermax's business-to-business solutions for heating, cooling, power and cogeneration plants; waste heat recovery units; systems for water & wastewater management and air pollution control; performance improving chemicals.

Thermax's operations are supported by ongoing Research & Development, tie-ups with global technology majors, an international sales & service network spread over 27 countries and state-of-the-art manufacturing facilities in 14 locations including India, China, Poland Indonesia, Denmark and Germany.

## Thermax: Water & Waste Solutions

More than 45 years of industry expertise in providing innovative solutions and best customer experience in meeting water and waste water treatment needs through our solutions, products and services.

Over 20,000 installations across various Industries like Food & Beverages, Textile, Pharma, Automobile, Steel, Power, Chemical, Fertilizer, Oil & Gas, Petrochemical and Urban sector.



### Sewage Treatment Products

- Modular, plug & play systems
- Low height STP ideal for basement installations
- Quick Delivery with less civil/site work



### Water Treatment Products

- Filters & softeners
- Standard RO Plants
- USP grade treatment plants



### Solid Waste Management

- Incinerator
- Kitchen waste to energy



## Klarimax

Klarimax is specially developed to reduce suspended solids from surface waters. The design is based on settling and rising rates of suspended impurities under various conditions.

### Advantages

- Low power consumption
- Requires less space
- Minimal civil works (only foundation)
- Standardized, hence quicker delivery

### Standard Capacities

- 0-4, 4-8, 8-16, 16-24, 24-32, 32-40, 40-48, 48-64 m<sup>3</sup>/hr



## Filters

Filtration is the most effective process to remove suspended impurities using a fine physical barrier. Wide ranges of filters catering to specific customer needs are being offered.

### Activated Carbon Filters

- Contains activated carbon as media
- Used to remove free residual chlorine, color, odor, oil & organics

### Dual Media Filters

- Consists of "Sand and Anthracite" as filtering medium
- Used to filter out suspended solids

### Iron Removal Filters

- Specially designed to remove iron from water
- IRF contains manganese dioxide layer, working as catalyst converting iron to ferric form, which can be easily precipitated and filtered out

### Garnet Filters

- Garnet Filters are used as polishing filter where the outlet turbidity quality requirement is stringent.

### Pressure Sand Filters

- Reduces turbidity
- Fine mesh sand used as the filtering media



## Softeners

Softening is a widely used process for reducing hardness forming cations (Ca & Mg) which precipitate and scale at very low temperatures and pressures. Softening is a reversible ion exchange process wherein specific ions are exchanged with sodium ions present in the resin group.

### Unique Features

- Available in FRP/ GRP vessels upto 42" diameter
- Sleek design in MS with single-valve operation
- Rugged packed bed design in up-flow operation
- Flexibility in resin volumes

### Standard Capacities

- 0.1- 25, 3.5 - 35, 0.3- 25, 3.5 - 230 m<sup>3</sup>/hr
- Upto 500 m<sup>3</sup>/hr available on request





## PuriSmart

Purismart is a fully automatic skid mounted filter & softener plant. It removes hardness from water by using ion exchange technology. It has a sleek designed especially for bungalows and societies.

### Capacities

- 2000 LPH

### Features

- Removes hardness to commercial zero level
- Automated operation
- Compact; skid mounted



## LoFlo RO

LoFlo RO has been designed and standardised to produce drinking water at smaller flowrates. It could be used for requirements industrial or commercial establishments and for residential use.

### Standard Capacities

- 200, 300, 500, 750, 1000, 2000, and 3000 LPH

### Advantages

- Compact & modular
- Easy installation, operation and servicing
- Online product water quality monitoring
- Automation options available



## Digilite

Digilite is fully automatic skid mounted RO plant. It provides all the information related to water quality and can be accessed from your mobile phone. This technology helps the remote operation of the plant.

### Capacities

- Available in 4" and 8" RO Models available for 2000, 4000 and 6000 TDS
- Capacity Ranges 4" - Digilite : 1000, 1500, 2000 and 2500 LPH
- Capacity Ranges 8" - Digilite : 3000, 3500, 4000, 4500, 5000, 6000, 7000, 8000, 9000, 9500, 10000, 12000 LPH

### Features

- Compact; skid mounted
- Programmable
- Data-logging possible



## E Series RO

The latest offering from Thermax Water and Waste Solutions, E Series RO is a specialized end-to-end package with compact and modularized RO plant. This consists of a filter with a membrane-based separation of dissolved impurities.

### Standard Capacities

- 200 LPH, 400 LPH, 600 LPH, 800 LPH, 1000 LPH, 1200 LPH, 2000 LPH, 3000LPH

### Salient Features

- End-to-End Solution with Skid-Mounted Modularized Plant
- Easy Maintenance and Access
- Remote Monitoring Enabled (Optional)



## SIRO

Reverse Osmosis separates dissolved solids and minerals from water. We offer and ensure the right solution from our wide range of combinations with our customized software, SIROSOFT.

### Advantages

- Online product water quality monitoring
- Compact & modular
- Multistage centrifugal pump with appropriate MOC
- Membrane & pump protection system

### Capacities

- 1 m<sup>3</sup>/hr to 40 m<sup>3</sup>/hr
- 40 to 200 m<sup>3</sup>/hr available on request





## Demineralisation (DM) Plants

Demineralization is a proven & reliable technology used in water treatment to remove minerals, using the principles of ion exchange, de-gasification and polishing. It is used to produce mineral-free water. Considering your inlet water quality and capacity parameters, customized solutions can be offered based on inlet water quality, capacity and requirements.

### Salient Features

- Resins with high resistance, longer life, high exchange capacities & lower chemical consumption
- Low maintenance & easy installation
- Cost effective standard models
- Advanced software used for optimal selection and configuration



## Containerised Plants

Thermax offers the mobile water treatment plant, encased in a robust steel container that makes it easy to transport. Each unit has plug & play type connections which can be integrated with level controls.

### Salient Features

- Pure mobility
- Quick Installation
- PLC mounted panel for auto operation
- Minimal Site/ Civil Work
- Compact, neat installation



## GenmaX

GenmaX is a complete skid mounted plug and play system to generate high purity water. These systems are used to meet requirements & specifications of water with USP grade.

### Standard Capacities

- 500 LPH to 6000 LPH

### Salient Features

- PLC based fully automated system
- VFD controlled flow rates during operations & sanitization
- Uniform & comprehensive documentation, DQ, IQ & OQ
- Configured to minimize microbial growth



### Inlet & Outlet Design Parameters

Inlet Parameters		Outlet Parameters	
TDS	< 100 mg/l	pH	5.0 - 7.0
Total Hardness as CaCO3	< 5 mg/l	Conductivity	< 1.3 u mhos/cm
Silica	< 2 mg/l	Microbial Count	< 100 CFU/ML
SDI	< 1	TOC	< 500 ppb
TSS	Nil		
Turbidity	Nil		
pH	7.5 - 8.5		



## BioCask

BioCask is a state-of-the-art technology for domestic wastewater treatment by Thermax. The innovative design of the BioCask has overcome the limitations of a conventional wastewater treatment system. The BioCask uses the first-of-its-kind unidirectional fluidization pattern. This pattern used oxygen efficiently which is required for degradation of organic impurities.

### Salient Features

- Perfect for basement installation, where height is less than 3 meters
- Reduced operating costs due to high oxygen transfer efficiency
- Minimal civil work
- BOD < 5 mg/l without ultrafiltration

### Standard Capacities

- BioCask Mini : 10 KLD and above
- BioCask : 50, 100, 150, 200, 250 & 300 KLD (modular units for higher capacities)





## atoM

The latest offering from Thermax Water and Waste Solutions, atoM is a unique modularised MBR product to treat sewage efficiently; contributing to the circular economy model of reduce, reuse and recycle.

### Salient Features

- Completely Modularised
- Most Compact Sewage Recycle Plant
- Complies with Latest PCB Norms
- 55% Installation Area Reduction
- 40% Lesser Height Suitable for Basement Installation

### Standard Capacities

- 10, 20, 30 and 50 KLD



## FABx

This space and power saving technology is a better alternative to conventional waste water treatment plants. FAB (Fluidized Aerobic Bioreactor Technology) offers an effective solution to water situation with constraints such as scarcity of open space, network piping issues, high power and land cost.

### Standard Capacities

- Prefabricated : 50,75 & 100 KLD (modular for other capacities)
- On-Site Fabrication : 10 to 5000 KLD

### Salient Features

- Skid Mounted; Quick & Easy Installation
- Odorless operation, with a self – regulating system
- Pre-engineered; Low Cost & Fast Delivery
- Achieves < 5 TSS mg/l without coagulant, flocculent
- Achieves < 5 BOD mg/l without UF membranes



## CuBe

Thermax's latest novel offering, 'CuBe', is a completely modularized Sequential Batch Reactor (SBR) for wastewater treatment. Catering domestic and commercial wastewater, 'CuBe' achieves De-nitrification followed by aeration-nitrification and clarification, in a timed sequence-batch mode - all in a single reactor basin. 'CuBe', offers reduced area footprint and considerable height reduction with minimal manual intervention. It offers higher flexibility in operating conditions with respect to feed flow and organic load.

### Salient Features

- Completely Modularized
- Higher Nutrient Removal
- 50% Installation Area Reduction
- Consistent High Quality Treated Water
- Upto 45% Lesser Height Suitable for single basement installation
- Offers Flexible Loading Conditions Hydraulic and Organic

### Capacities

- 10, 20, 30 and 50 KLD



## Seqtreat

Seqtreat (Sequential Batch Reactor Technology) is one of the most advance technologies developed by Thermax for wastewater treatment. Especially for domestic wastewater, Seqtreat achieves equalization, aeration and clarification in timed sequence batch mode - all in a single reactor basin. Also, the cycle time of treatment of batches can be optimized to suit variations in organic loads. Aerobic phase and controlled anoxic phase are used to reduce organic, nitrogen and phosphorus compounds.

### Standard Capacities

- 10, 20, 30, 50, 100, 150, 200, 250, 300, 350, 400, 500 KLD
- Customized higher capacities available

### Salient Features

- Novel decanting mechanism developed by Thermax
- Compact, easy to operate & scalable
- Nitrogen & Phosphorus removal capability
- Treated Sewage suitable for recycle & reuse



## Biofilter

Biofilter is skid mounted sewage treatment plant, which combines attached and suspended growth processes.

### Standard Capacities

- 10, 20 & 30 m<sup>3</sup>/day

### Salient Features

- Perfect for basement installations, where height is less than 3.8 meters
- Suitable for wastewater recycling
- Minimum civil work
- Minimal sludge removal frequency, once in 30 days



## Bioenergen

Bioenergen is one of the most advanced and highly efficient organic biodegradable waste processing plants to generate biogas. It is the most favored alternative to treat organic biodegradable waste to generate fuel and the residue nutrients-rich fertilizer.

### Standard Capacities

- 250 & 500 kg/day
- Customized capacities available on request

### Advantages

- High biogas yield
- High methane content
- Uninterrupted processing without frequent addition of bio-inoculum
- Residue can be used as manure



## Terminator

Terminator is an established technology, which removes color from the waste waters. The treated wastewater could be reused further.

### Standard Capacities

- 0-1.5, 1.6-2.5, 2.6-5.0, 5.0-10, 10-15, 15-20, 20-25, 25-30, 31-42 m<sup>3</sup>/hr

### Salient Features

- Less space requirements
- Removes 100% color
- Minimal civil works (only foundation)
- Standardized, hence faster delivery & installation
- Low power requirement & capital investment
- Specially designed for textile industries



## Incinerator

Thermax offers Destromat Pyrolytic Incinerators specifically designed to treat hazardous solid waste. Incinerators are designed to achieve the desired Destruction & Removal Efficiency (DRE) along with emission norms laid down by the Central Pollution Control Board.

### Unique features

- Multi-chamber design
- Tested & certified by Central Pollution Control Board(CPCB)
- Technical registration with DGS&D
- Adequate instrumentation for safety & control



### Technical Specifications

Type of Waste	Incinerator Burning Capacity(Kg/hr)							
	PGVS30	PGVS40	PGVS50	PGVS75	PGVS100	PGVS200	PGVS300	PGVS400
0	8	12	16	35	50	70	110	125
I	11	17	22	45	70	100	135	170
II	16	25	35	65	85	135	185	230
III	14	23	32	55	65	110	170	250
IV	12	17	22	35	50	55	80	110

### Options Available

- Heat recovery system & Auto feeding mechanism version for the above range are also available
- Higher capacity units, in the range of 300-1500 kg/Hr
- VS-with venture scrubber

## Rice Mill ETP

Thermax has developed highly efficient Effluent Treatment Plants to treat wastewater from Rice Mills.

### Standard Capacities

- 25 KLD & above

### Salient Features

- Minimum maintenance
- Low Chemical & Power Consumption
- Modular Design; Faster Delivery

