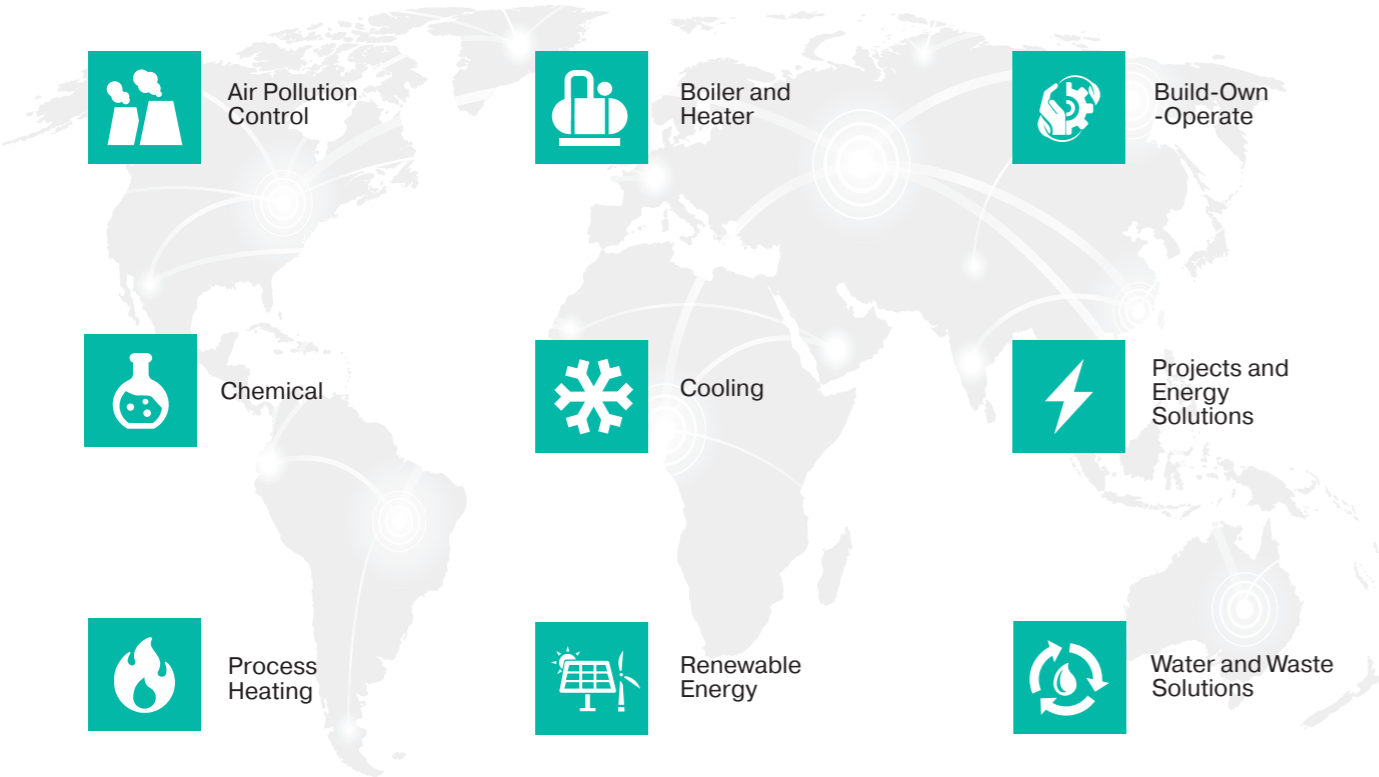


Conserving Resources,  
Preserving the Future.



Water and Waste Solutions



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## Advanced Mechanical Vapour Recompression

# Advanced Mechanical Vapour Recompression

## SALIENT FEATURES

Industries have been acknowledging the importance of optimising wastewater management of effluents. With stringent wastewater disposal norms and adverse industrial impacts on the environment, industries are more inclined towards safe disposal of generated wastewater. Contributing towards sustainability and efficient wastewater management, Zero Liquid Discharge solutions emerge as an important process to eliminate wastewater discharges. The system

concentrates effluent, into solid crystal waste, which can later be disposed of. Thermax has developed its own highly effective in-house ZLD System, based on Mechanical Vapour Recompression i.e. the MVR technology, a mechanism that utilizes the heat released from the vapors. Thermax's MVR reduces the energy used in the evaporation process, by reusing the heat energy contained in the vapor, which would otherwise be wasted.





**Capacity Range: 5 KLD - 100 KLD** (available for larger capacity, if required)


**Feed and Product Quality:**  
Any reject stream with dissolved solids (concentration > 1% i.e. 10000 ppm) and free from Suspended Solids, COD/BOD, Temporary Hardness, Oil and Reactive Silica.


**End Product:**  
Powder form, solids with <10% free moisture after using ATFD or with <20% moisture after Centrifuge/Decanter.


**Condensate:**  
Clear liquid with < 250 ppm dissolved solids and neutral pH.


 **40% Energy Saving**  
Compared to Conventional ZLD System


 **Lower Operating Cost**


 **Reduced CO<sub>2</sub> Emission**  
No Boiler Requirement


 **In-house R&D and Effluent Water Characterization Facility**


 **IoT Enabled with Completely Automated Operations**  
PLC Controlled SMART MVR system

 **“Thermosiphon” integrated with ATFD**  
Patented Technology with Uniform heat load distribution, better availability & trouble-free operation

 **40% Lesser Footprint**  
Compared to Conventional ZLD System

 **Aesthetically Appealing**

 **No Requirement of External Steam**  
No Boiler & Associated IBR Regulatory Requirements to End Client

 **Plug-n-Play System**

### Market Segments

  
Automobiles

  
Food & Beverages

  
Chemical

  
Sugar

  
Metals & Minerals

  
Textiles

  
Cement

  
Power

  
Pharmaceuticals

  
Packaging & Paper

  
Distilleries

  
Polymer and Polyester