



## Greener Technologies for Cleaner Air

Effective solutions for abatement of particulate and gaseous pollutants



## Thermax Ltd. - Conserving Resources and Preserving the Future

Thermax, a frontrunner in providing sustainable energy and environment solutions is committed to living up to its brand promise of 'Conserving Resources and Preserving the Future'.

Thermax's product portfolio covers air pollution control solutions, heating, cooling, water and waste management, and specialty chemicals. The company also designs, builds, and commissions large boilers for steam and power generation, turnkey power plants, and waste-to-energy systems.

Thermax remains focussed on continuously strengthening its green portfolio to be a clean air, clean energy, and clean water company. We have initiated various actions on charting the decarbonisation path, with a clear roadmap for achieving 25% reduction by 2025. Zero We Go is the sustainability initiative by Thermax that focusses on restoring the environment through reduced emissions associated with industrial processes.

### Air Pollution Control Business of Thermax

For more than four decades, the Air Pollution Control (APC) business of Thermax has been a focal point entity for all industrial and utility sectors concerned to control particulate and gaseous emissions. Our range of solutions offers multifold benefits to various industries like power, cement, steel, sugar, refinery & petrochemicals, paper, chemical, food, textiles, fertilizer, etc., helping them to improve the quality of air and also comply with stipulated emission norms.

Our resources include a dedicated manufacturing facility accredited with IMS certification (ISO 9001:2015, ISO 14001:2015, ISO 45001:2018) which complies with the health, safety, and environmental policy; and state-of-the-art research and development centre for continuous product improvement.



## Business Offerings

Concept to commissioning of projects

Spares and value added services

Supply of flange to flange equipment

Modernisation, renovation, and upgradation of existing systems

# Products and Services

## Electrostatic Precipitators (ESP)

- Dry and wet type
- Captures 100+ types of particulate matters
- Continuous operation with minimal maintenance requirement
- Fully automatic DSP based controller with power optimisation
- Double spiked rigid discharge electrodes
- Specially designed self-stiffened collecting electrodes
- Top rapping system - Thermax Impulse Gravity Impact (TIGI), and Bottom rapping system - tumbling hammer design



## Fabric Filters

- Pulse jet fabric filters online and offline design offerings with patented pulsing technology
- Low compressed air pressure and consumption
- Low range of operating differential pressure
- Varied bag length available from 1 - 12 metres
- Suit to site design
- Design compliance to NFPA guidelines



## Combofilters (ESP + Fabric Filters)

- Enables system upgrade that ensures compliance to revised emission norms without the need for additional space requirement
- Low compressed air pressure and consumption
- Lower differential pressure across the system
- Ensures optimum use of the allied system



## Scrubbers

- High collection efficiency for small and sub-micronic particles
- Custom built units capable of handling high gas volumes
- Designed to handle high pressure drops
- High system tolerance for fluctuating gas volumes
- Uniform water distribution, avoiding hotspots and reducing abrasion



# Products and Services

## Flue Gas Desulphurisation (FGD) System

Our FGD system is majorly available in three variants, each with distinctive capabilities for emission control.

### Wet Flue Gas Desulphurisation (WFGD)

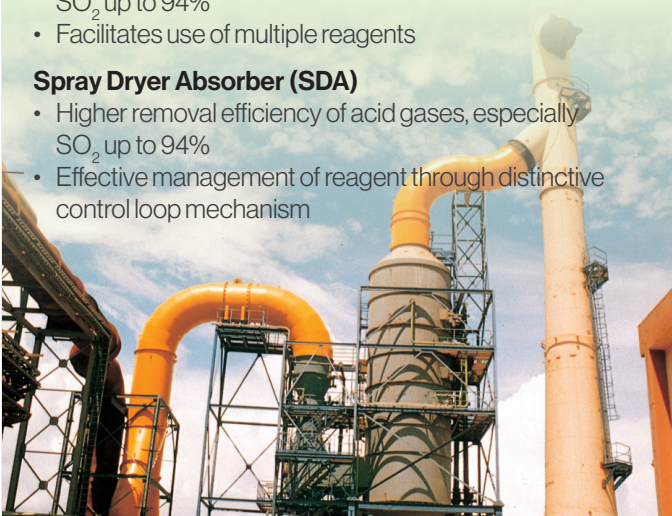
- Higher removal efficiency of acid gases, especially  $\text{SO}_2 > 95\%$
- Facilitates use of multiple reagents
- Produces gypsum as a by-product which is commercially saleable

### Dry Sorbent Injection (DSI)

- Higher removal efficiency of acid gases, especially  $\text{SO}_2$  up to 94%
- Facilitates use of multiple reagents

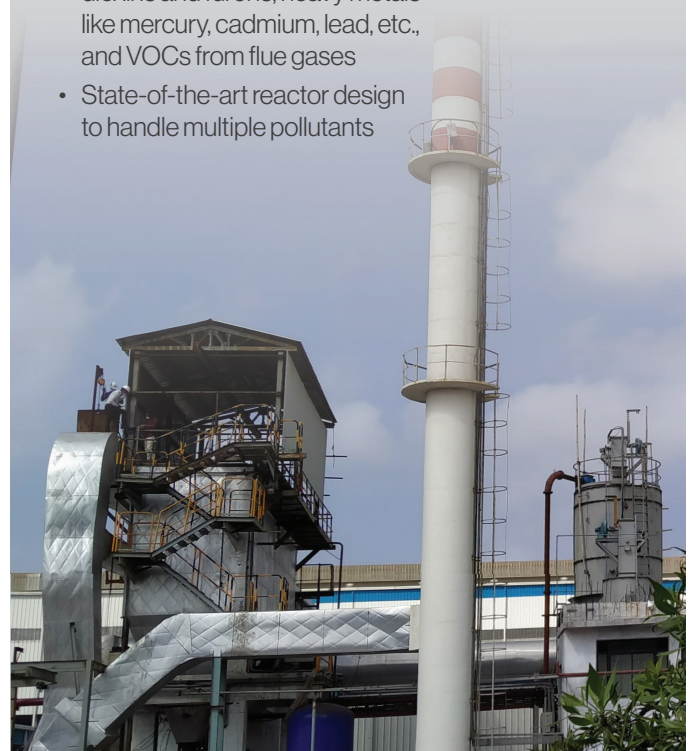
### Spray Dryer Absorber (SDA)

- Higher removal efficiency of acid gases, especially  $\text{SO}_2$  up to 94%
- Effective management of reagent through distinctive control loop mechanism



## Multi Pollutant Flue Gas Cleaning System

- Single stop solution for the treatment of HF, HCL,  $\text{SO}_2$ , dioxins and furons, heavy metals like mercury, cadmium, lead, etc., and VOCs from flue gases
- State-of-the-art reactor design to handle multiple pollutants



## Modernisation, Renovation, and Upgradation of Existing Systems

- Optimum solution to keep capital investment low
- Efficient utilisation of the existing equipment
- Ensures improved performance for aging equipment
- Design validation to cater to the future requirement of alternate fuels



## Spares and Value Added Services

- Operations and maintenance (O&M) services
- Conditional assessment / health check-up and troubleshooting of Air Pollution Control (APC) equipment
- Engineering services for efficient gas distribution
- Spare parts management for Thermax as well as non-Thermax APC equipment
- Onsite training



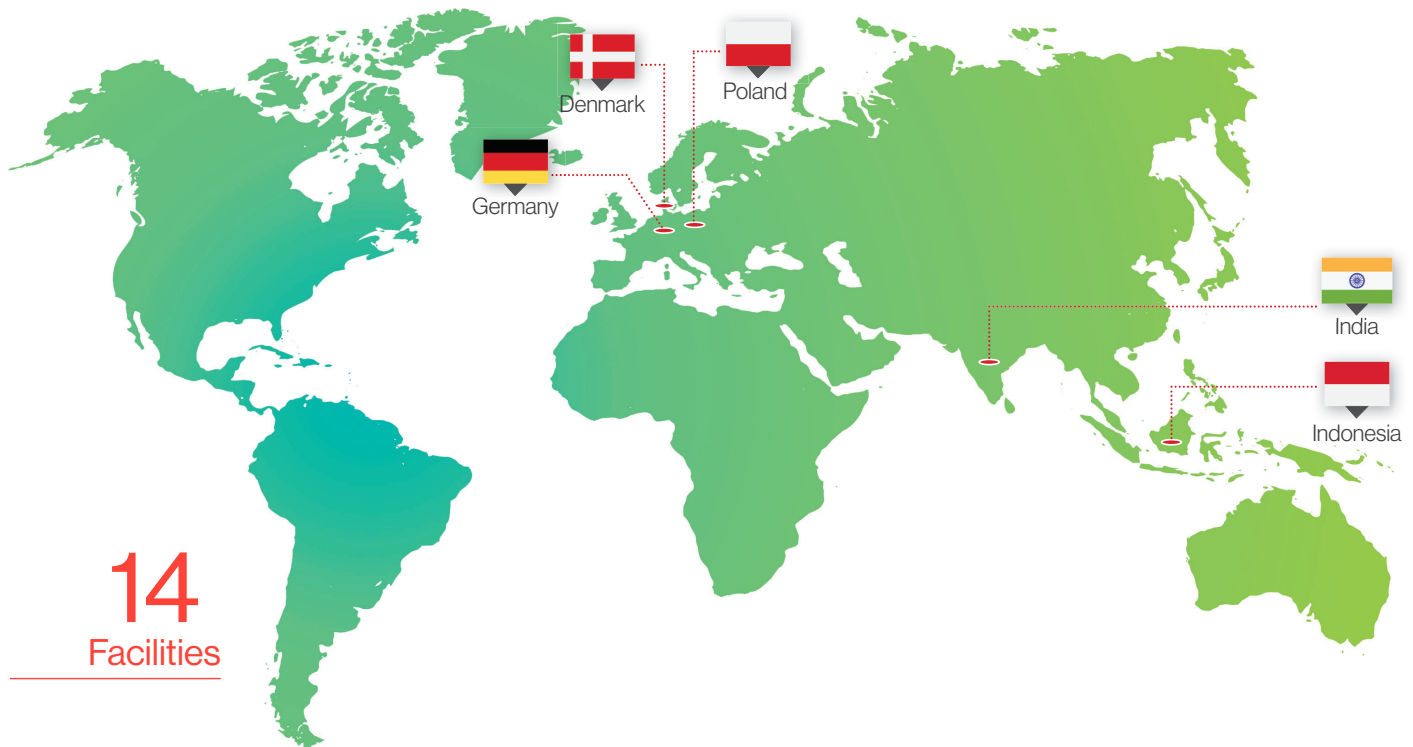
# Global Network

88  
Countries

Head Office  
**India**

Manufacturing Units

- India (10)
- Indonesia
- Denmark
- Germany
- Poland



## International Subsidiaries, Sales & Service

- Bangladesh
- Brazil
- Canada
- Denmark
- Egypt
- Germany
- India
- Indonesia

- Italy
- Kenya
- Malaysia
- Mauritius
- Myanmar
- Netherlands
- Nigeria
- Philippines

- Poland
- Russia
- Saudi Arabia
- Senegal
- Singapore
- Sri Lanka
- Tanzania
- Thailand

- Turkey
- U.K.
- U.S.A.
- UAE
- Vietnam
- Zambia

# Global Clientele

## Metals

- ArcelorMittal
- Welspun
- TATA Steel, India
- Steel Authority of India (SAIL), India
- JSW Steel, India
- Hindalco, India
- Vale Oman Pelletizing Company
- Konkola Copper Mines Plc, Zambia



## Palm Oil

- Natural Palm Oil Company Limited, Thailand
- Wilmar Group, Malaysia
- IOI Plantation, Malaysia
- FELCRA Berhad Plantation, Malaysia



## Pharma

- Cipla, India
- Sun Pharma, India
- Zydus Cadila, India
- Lupin, India
- Mylan, India



## Cement

- LafargeHolcim
- HeidelbergCement
- UltraTech, India
- Ambuja Cement, India
- Sharjah Cement Factory, UAE
- Dangote Cement Plc, Nigeria
- National Cement Company, Kenya



## Sugar

- Incauca Sugars, Colombia
- Consorcio Azucarero De Empresas Industriales (CAEI), Dominican Republic
- Busia Sugar, Kenya
- Mitr Phol Group, Thailand
- Crystallia Co. Ltd., Thailand
- Universal Robina Corporation (URC), Philippines





### Chemical

- Phillip Carbon, India
- Sterlite, India
- Reliance, India
- Grasim, India
- Thai Carbon Black, Thailand
- Ansell Co. Ltd., Thailand
- Dipped Products Co., Ltd., Thailand
- W.A. Rubbermate Co., Ltd.



### Paper

- Bataan 2020, Philippines
- RGE Group, Singapore
- JK Paper, India
- Ballarpur Industries Limited (BILT), India



### Textile

- Arvind, India
- Reliance, India
- JCT, India
- Grasim, India



### Independent Power Plant

- NTPC, India
- TATA Power, India
- Reliance, India
- Narayan Energy, India



### Captive Power Plant

- Omnicane Thermal Energy Operations (La Baraque) Ltd., Mauritius
- JGC Corporation, Philippines
- KPN Green Energy Solution Public Company Limited, Thailand
- SBANG Corporation Ltd., Thailand
- DP Cleantech (Thailand) Co., Ltd., Thailand



[www.thermaxglobal.com](http://www.thermaxglobal.com)



Boiler & Heater



Absorption Cooling



Air Pollution Control



Process Heating



Solar



Water & Waste Solutions



Power Generation



Process Cooling



Chemicals



**THERMAX**

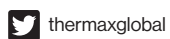
Sustainable Solutions in Energy & Environment

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