Your Full-Service Cooling Technologies Company

www.paharpur.com

Late Mr. Mahendra Swarup

Founder - PAHARPUR COOLING TOWERS LTD.

MDs' Message:

Paharpur Cooling Towers was set up with a vision by our founder Late Mr. Mahendra Swarup. A vision to design and manufacture process cooling equipment with an uncompromising attitude towards quality. Today that vision is followed throughout the organisation and touches the heart of over 6,000 personnel who have incorporated this vision as their own. It is this undying commitment that has enabled our team to cater to a growing list of clients throughout the world. Not only with cooling towers, but also with newer and more contemporary products to satisfy growing needs. We take this opportunity to thank our customers all over the world.

Vikram Swarup

Gaurav Swarup

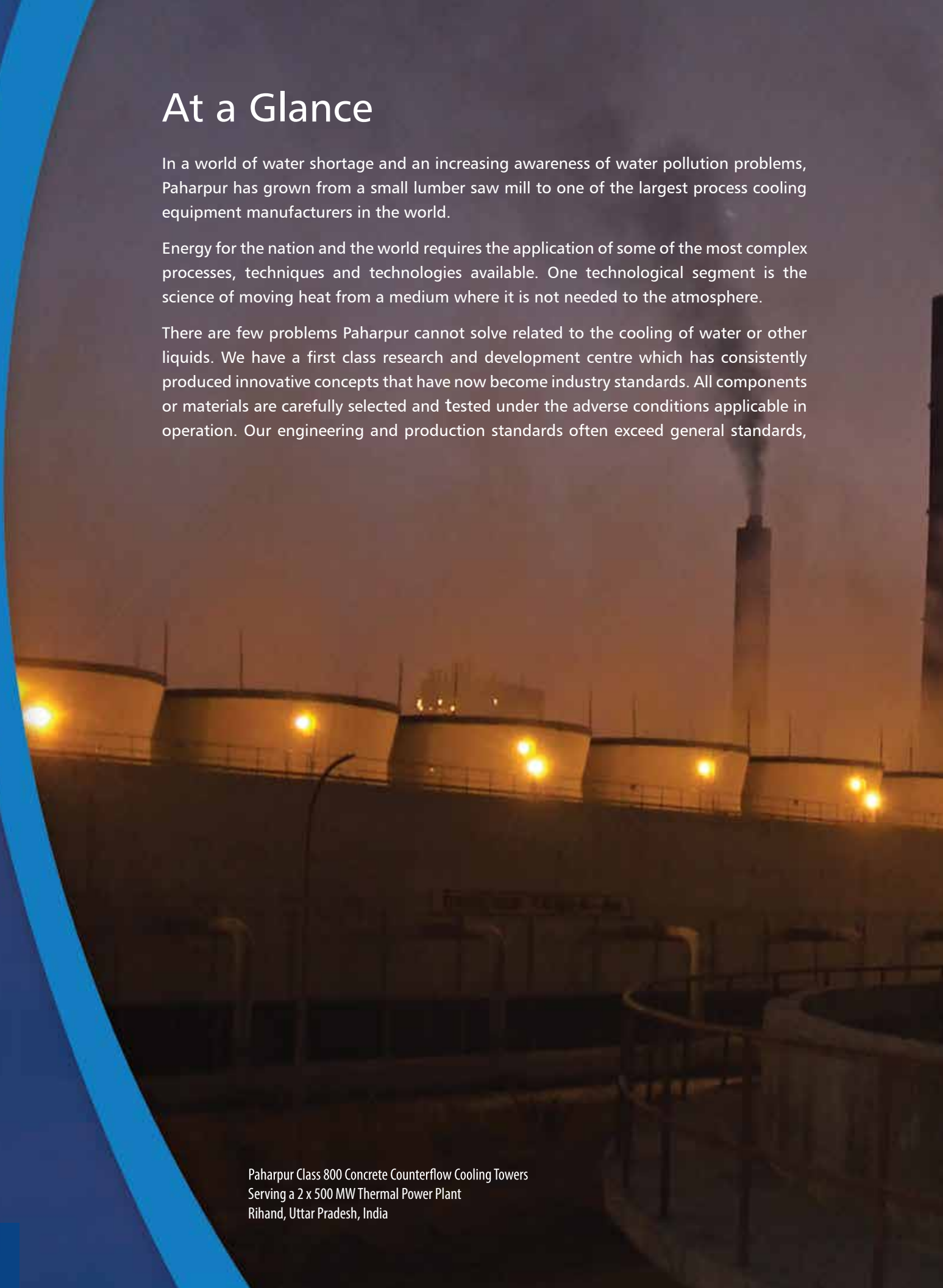
PAHARPUR

At a Glance

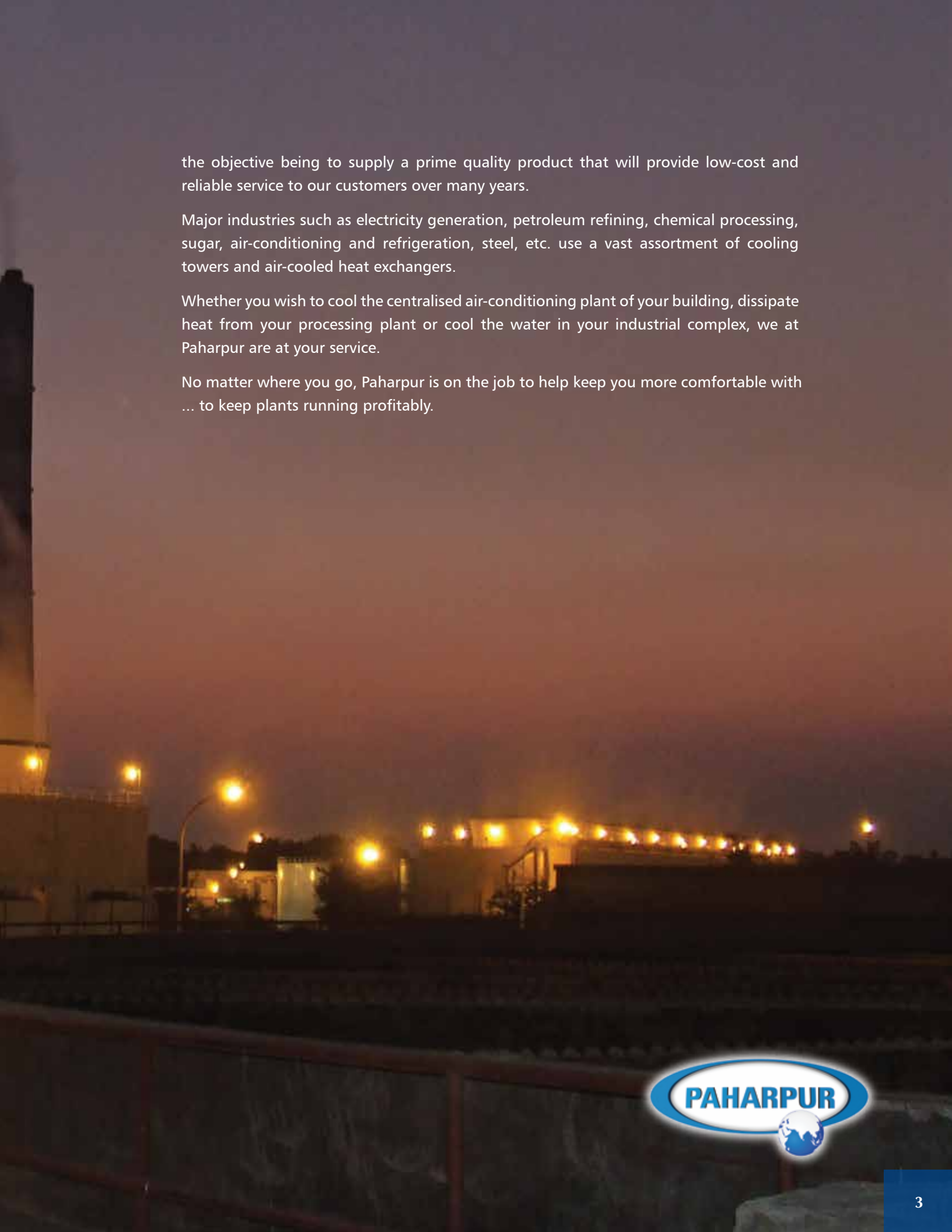
In a world of water shortage and an increasing awareness of water pollution problems, Paharpur has grown from a small lumber saw mill to one of the largest process cooling equipment manufacturers in the world.

Energy for the nation and the world requires the application of some of the most complex processes, techniques and technologies available. One technological segment is the science of moving heat from a medium where it is not needed to the atmosphere.

There are few problems Paharpur cannot solve related to the cooling of water or other liquids. We have a first class research and development centre which has consistently produced innovative concepts that have now become industry standards. All components or materials are carefully selected and tested under the adverse conditions applicable in operation. Our engineering and production standards often exceed general standards,



Paharpur Class 800 Concrete Counterflow Cooling Towers
Serving a 2 x 500 MW Thermal Power Plant
Rihand, Uttar Pradesh, India



the objective being to supply a prime quality product that will provide low-cost and reliable service to our customers over many years.

Major industries such as electricity generation, petroleum refining, chemical processing, sugar, air-conditioning and refrigeration, steel, etc. use a vast assortment of cooling towers and air-cooled heat exchangers.

Whether you wish to cool the centralised air-conditioning plant of your building, dissipate heat from your processing plant or cool the water in your industrial complex, we at Paharpur are at your service.

No matter where you go, Paharpur is on the job to help keep you more comfortable with ... to keep plants running profitably.

Experience

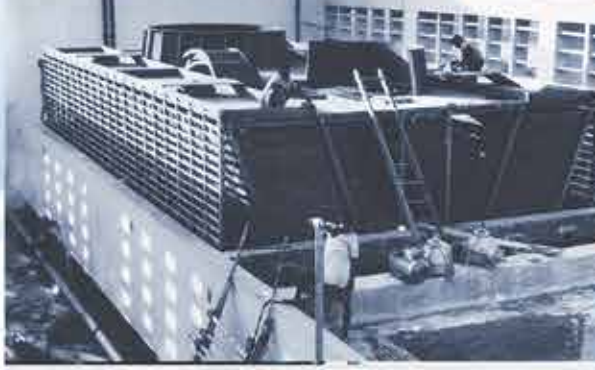
In its seven decades of existence – out of which more than 60 years have been in designing and manufacturing evaporative water cooling towers and other products related to water processing – Paharpur has come to be acknowledged as the pioneer in the Indian cooling tower industry.

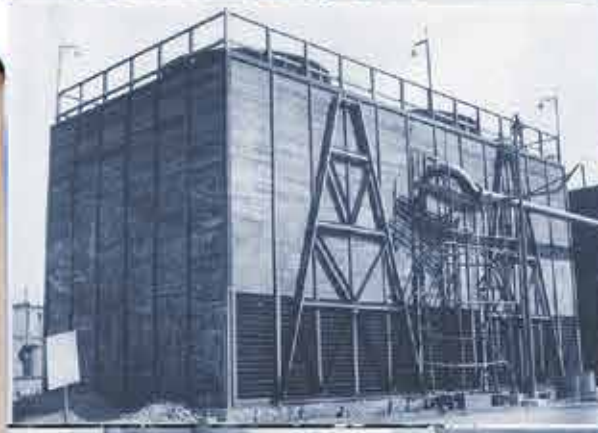
At today's selling prices, Paharpur has sold cooling towers valued at over Rs. 362 billion. If these cooling towers were all working together they would be able to cool more than 851 million litres of water every minute or 1,225 billion litres every day (24 hours).

The Paharpur team consists of highly qualified engineers and professionals with over 5,600 man-years of experience in the field of cooling tower application engineering, design, erection and troubleshooting.

In virtually every industry one company is recognised as the leader. Any time there is a fresh new idea for improving the product (or improving service), Paharpur is the company you expect to introduce it.

In the Indian cooling tower industry, the company looked at for leadership is Paharpur. You will know why when you realise that Paharpur has pioneered several improvements in cooling tower design and operation in the past 60 years. Paharpur has emerged as one of the largest process cooling equipment manufacturers in the world, with products conforming to the best international specifications... and service to match.





PAHARPUR

Excellence

Unique in the industry, Paharpur has the capability to offer full service to process cooling equipment users.

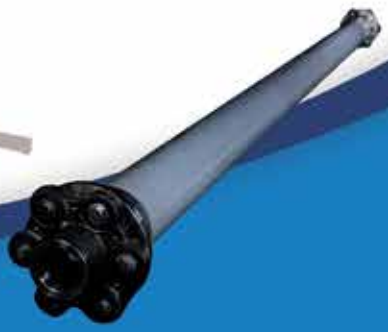
Paharpur's broad spectrum of products ranges from small factory-assembled cooling towers, to large concrete towers that require construction on site, to air-cooled heat exchangers and steam condensers.

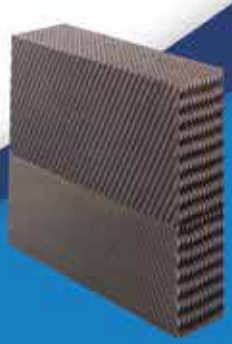
Growing concern over environment compatibility, closer evaluation of energy costs, and the shifting availability of basic materials and water require continuous research and development to match customer requirements with the best materials and design techniques. This has led to the design and installation of mechanical draught towers in fibreglass, steel, wood and concrete with wood, plastic and concrete fill options and the development of hyperbolic natural draught towers.

The products manufactured by Paharpur cover a wide range and our manufacturing procedures are completely in accordance with the best international designs and specifications. Meticulous care is taken during manufacturing of all components to remain within close tolerances. The lumber components are pressure-impregnated with chromated copper arsenate by the full cell process.

Paharpur is an ISO 9001, ISO 14001 and ISO 45001 certified company. We have six manufacturing plants located at Kolkata and Bhasa in West Bengal, Sahibabad in Uttar Pradesh, Kandla & Savli in Gujarat and Zhangjiakou in China with their own up-to-date lumber treatment facilities and CNC machines, employing over 2200 people. The annual production is more than 2,000 cooling tower cells, which includes more than 550 cells with fan size of 7.315 m or bigger.

Paharpur had a technical collaboration for 30 years with The Marley Cooling Tower Company, USA, which ended in 1993. During that period Marley technology was fully absorbed by Paharpur. Today, Paharpur keeps itself abreast of the best in the world by its own R&D efforts and contacts with the world's leading cooling tower and component designers and manufacturers. Some of the most valuable features of Paharpur cooling towers don't appear on a bid sheet, a design drawing or among the specifications. These are the 'plus factors', the extras that a buyer of Paharpur cooling towers and air-cooled heat exchangers gets at no additional cost.





The Paharpur Guarantee

Paharpur guarantees unequivocally that each Paharpur cooling tower and air-cooled heat exchanger will meet performance specifications. Paharpur backs up this guarantee without reservation and urges buyers to test tower performance.

Undivided Responsibility

With Paharpur, undivided responsibility is a basic manufacturing and marketing philosophy. All components in Paharpur towers are fabricated, processed or manufactured to strict specifications. The quality of each component is carefully controlled under rigid standards. Replacement parts are available from stock. Service requests are answered by one supplier – Paharpur.

Technical Service

Paharpur encourages customers to come to them with their queries. Paharpur has a full-fledged engineering back-up team to assist customers right from the project feasibility study stage. The proper time to call us is when you conceive your project.

After Sales Service

After sales service for Paharpur products is guaranteed to all users. Field service engineers are available at any time to assist consulting engineers, tower owners and tower operators. Repeat orders from old customers are testimony to their complete satisfaction with Paharpur towers and after sales service.

Reconstruction Service

At Paharpur the reconstruction of an existing tower – whether Paharpur's or a competitor's – is given the same in-depth system analysis as is given the design of a new tower. From myriad components, all manufactured by Paharpur, the precise combination of new and existing can be chosen to accomplish desired results.

PAHARPUR

Research & Development

From its inception, Paharpur has been committed to a strong research & development programme.

Right from the beginning, Paharpur recognised that assembling a cooling tower from an agglomeration of commercially available components was counterproductive to quality and dependability. The saturated, typically corrosive environment encountered in a cooling tower produces unacceptable failure rates – and the chance of the several components performing within their respective optimum design limits is remote, and unpredictable.

Accordingly, **each component of a Paharpur cooling tower, air-cooled heat exchanger or air-cooled steam condenser (with the exception of the motor) is both designed and manufactured by Paharpur**. They are not individually designed, but are developed in the context of the overall cooling system.

Some of Paharpur's latest product and component developments include:

- RXF - India's second crossflow CTI-Certified cooling tower range
- OXF-30K - India's first crossflow CTI-Certified cooling tower range
- CF3 counterflow CTI-Certified range
- Single-Row Air-Cooled Steam Condenser
- Series 9KF modular counterflow FRP cooling tower
- Series CF-II induced draught counterflow FRP cooling tower
- Crossflow cooling towers with corrosion resistant pultruded FRP structure
- 13'-9" high X-ribbed fan cylinder for 10 m diameter fans
- Back-stop assembly for gearboxes for anti-wind milling applications
- V-2 PVC splash bar
- 336" diameter hollow-blade fan
- 11 m diameter fan
- Carbon / glass fibre composite driveshaft
- Mixed splash / film fill for crossflow cooling towers

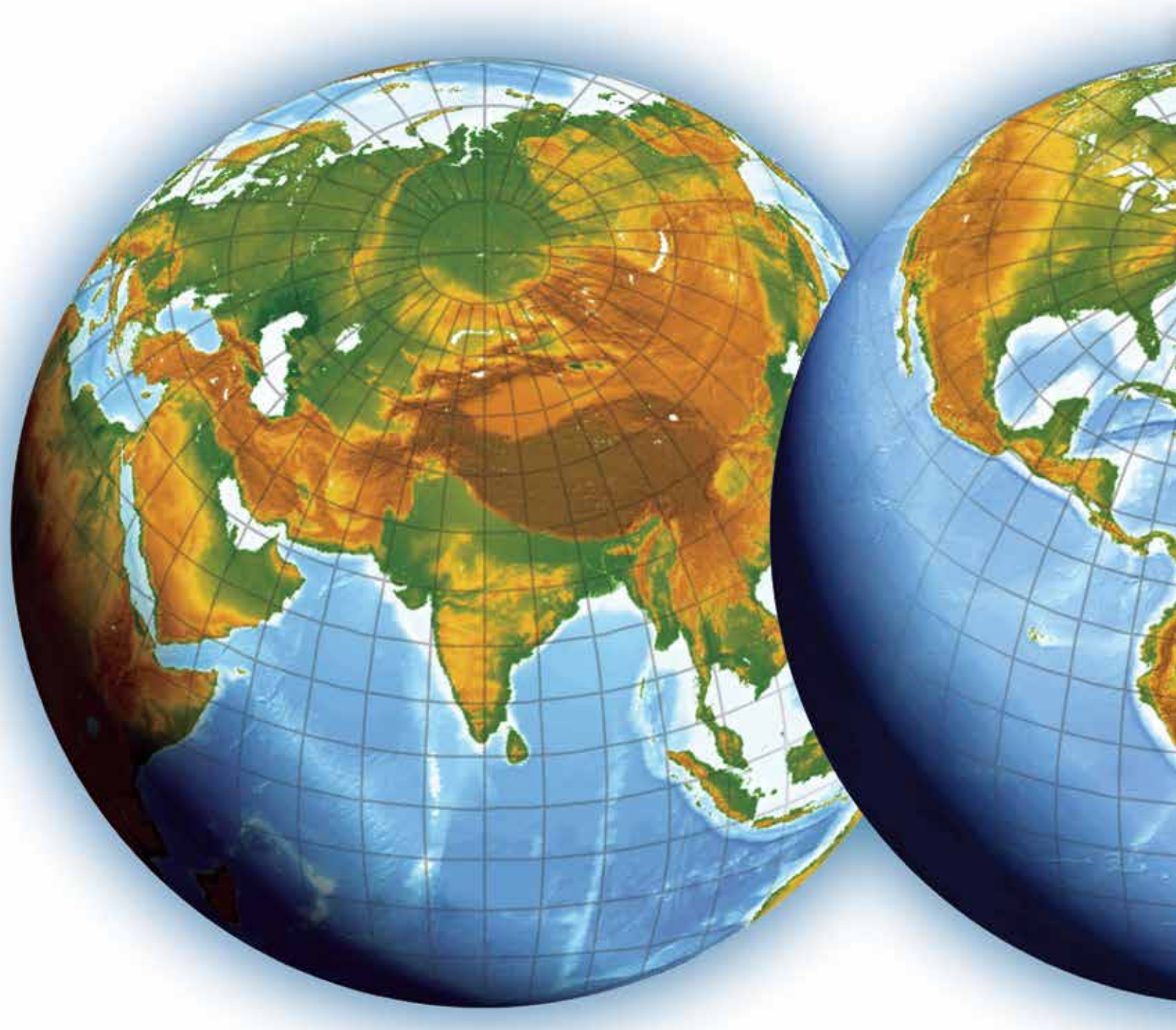
These developments take place within Paharpur's R&D centers located at Kolkata and Brussels. We have the most extensive cooling tower test facilities which are unique to the cooling tower industry.

Components are accurately tested under duress before introduction to the market. Ideas from our engineering division and customers are either proven under the worst possible practical conditions or rejected as not suitable.

From this experience we are able to recommend with authority the selection of materials and components to counteract virtually any aggressive cooling requirement.

At Paharpur the commitment to design excellence, technical superiority and product quality shall continue to remain deep-rooted...

PAHARPUR



Paharpur has installations in more than 60 countries, including:

Algeria	Australia	Bahrain	Bangladesh	Belgium	Bhutan	Bosnia	Brunei
Chile	China	Congo	Cuba	Egypt	Estonia	Ethiopia	France
Hong Kong	Indonesia	Iran	Iraq	Japan	Jordan	Kazakhstan	Kenya
Kuwait	Libya	Madagascar	Malaysia	Morocco	Myanmar	Nepal	New Caledonia
New Zealand	Nigeria	Oman	Pakistan	Peru	Philippines	Qatar	Saudi Arabia
Singapore	Sri Lanka	Syria	Taiwan	Thailand	Trinidad	Turkmenistan	UAE
Uganda	USA	Venezuela	Vietnam	Yemen			

Exports

Paharpur lays a lot of stress on exports of its poducts and services. The aim is not only to earn foreign exchange for the country but also to tap additional markets and remain abreast of the latest process cooling technologies and quality standards.

The first cooling tower Paharpur exported was way back in 1969. It was a small cooling tower for the central air-conditioning plant of a luxury hotel in Singapore. Since then, hundreds of Paharpur cooling towers and components have been exported to over 60 countries on every continent on the planet except Antarctica, and total exports have exceeded 800 million US dollars.

Paharpur's prices tend to be very competitive on C&F basis, particularly in neighbouring countries. Proximity to these countries also means shorter delivery and shipping cycles.

Applications in export jobs have been as diverse as giant fertiliser plants, power plants, petroleum refineries, paper mills, sugar plants, edible oil refineries, steel mills, chemical plants, textile mills, and central air-conditioning of hotels and shopping complexes.

Some of the most discerning contractors and consultants in the world have ordered Paharpur cooling towers for their projects and certified our quality and service as equal to the best anywhere.

Products

Cooling Towers

Factory-Assembled and Unitary Range

Paharpur factory-assembled water cooling towers are fabricated, assembled and tested at Paharpur factories before shipment to the job site. Thousands of installations have proven Paharpur designs to be the most efficient, and Paharpur factory-assembled and unitary towers have become the standard of the cooling tower industry. Multiple cell installation plans are available when your cooling requirements exceed the capacity of a specific factory-assembled tower.

Series AQ-3800 FRP & Series AQ-4800 Steel

Continuous design improvements and thousands of installations together with more than 25 years of manufacturing have made the Paharpur AQ range the standard of packaged cooling towers. Latest models offer reduced horsepower and energy requirements, low sound level, high efficiency film-type fill and corrosion-free fibreglass construction. Rugged mechanical equipment and proven design mean long service life and low maintenance costs. Available in fifteen models – 5 to 175 nominal tons (single cell capacity) with V-belt drive and venturi fan cylinder. Also available in heavy gauge galvanised steel construction. For high hot water temperature applications these towers can be supplied with wood fill. The FRP version is also available in forced draught design.

Series 6.1KF FRP & Series 200 Steel

The Series 6KF combines all the features of a rugged industrial tower range with the conveniences of a packaged product. 23 models of this factory-assembled cooling tower offer a wide range of cooling capacities. The Series 6KF cooling tower has been specifically engineered to deliver maximum service life while operating at minimal sound levels. Modular construction permits easy expansion, if required. Features that have made it the most successful "packaged" cooling tower include high performance film-type fill, low decibel level, and the time-tested Paharpur power train. The casing is constructed of corrosion-proof FRP and all other steel components are heavy hot-dipped galvanised. In the Series 200, the body is of heavy mill galvanised steel.

Series QF-20K FRP

The QF-20K is a unique cooling tower in its design and appearance. It offers users the advantages of corrosion-proof construction, proven Paharpur mechanical equipment, efficient PVC film-type fill, ease of maintenance, and architectural compatibility – a truly state-of-the-art GRP cooling tower.

Series CF-I & CF-II FRP

The CF-I & CF-II induced draught counterflow cooling towers represent the culmination of more than 60 years of design experience. With polyvinyl chloride film-type fill, glass-reinforced polyester casing and fan cylinders, Series CF-I & CF-II continue a tradition of excellence progressing from Paharpur's standard towers. CF-I towers have direct driven fans. CF-II towers are available with direct or gear drive.

Series 9KF FRP

Developed in 2010 to cater to the growing need of HVAC customers for high-capacity FRP counterflow towers, the Series 9KF is the latest in Paharpur's range of world-class packaged towers. With capacities ranging from 160 to 1000 nominal tons in over 30 models, you can be sure you'll find a tower that suits your specific need. Corosion-resistant FRP casing, pultruded FRP structure and the rugged Paharpur power train make it an ideal tower for those who want to "fill it, start it, forget it"!

Series CF3, OXF-30K and RXF-7K FRP (CTI-Certified)

Continuing in its tradition of innovation and leadership, Paharpur launched two CTI – Certified ranges in 2013/14 – the counterflow series CF3 and crossflow OXF -30K and one more in 2019 – the crossflow RXF -7K, the newest in Paharpur's roster of CTI – Certified ranges – thus becoming India's first and only company to have three CTI – Certified ranges, including the only crossflow ranges.

The CF3 builds on the robust chassis of the Series 9KF, with pultruded FRP framework, FRP casing, PC-47 film type fill and rugged Paharpur mechanical equipment – in counterflow design. The OXF -30K is an upgradation of the faithful Series QF -20K, with its unique octagonal shape – and performance enhancements to suit CTI requirements – all in a vertically compact, crossflow design, with capacities to suit almost any HVAC cooling requirement. The RXF -7K's design is based on the multifunctional 6.1KF. With its rectangular shape and double -flow design, easy online maintenance and minimal area requirement, the RXF is truly a workhorse for the HVAC industry.

Note : All factory assembled models can also be supplied knocked – down for export or wherever freight costs are a major consideration.

Comfort Cooling and Intermediate Industrial Applications

Paharpur field-erected cooling towers are prefabricated at Paharpur's own plants under factory-controlled conditions, then packaged and shipped to the job site. Materials and techniques used have been proven by more than 60 years of experience and thousands of installations, supported by an extensive research and development programme. This broad experience and proven performance assures you of the most efficient and economical cooling tower installation to meet your specific cooling requirement.

Series 9SF & 10DF Wood, FRP

Smallest of the Paharpur intermediate line of cooling towers, the Series 9 is available in single-flow design and thereby uniquely suited for limited space installations. The inert materials used in structural and functional components are specifically designed for cooling tower application. A low silhouette and minimum plan area, together with high capacity per unit volume, are major design advantages. These towers are ideal for intermediate size air-conditioning systems and industrial duty. The Series 10DF tower is available in sixteen low profile models. Widespread use of inert fibreglass components ensures long life. **Now also available with pultruded FRP structure.**

Series 15 & 18 Wood, FRP

The highly versatile Series 15 & 18DF or SF is adaptable for intermediate process cooling, large air-conditioning applications, and specialised cooling requirements. As with all other models, fans, gear reducers and other components are designed and manufactured specially for cooling tower use. Splash fill enables the Series 15 & 18 to cope with poor water quality which would kill film fill. **Now also available with pultruded FRP structure.**

Series S-100, 120 & 160 Wood

Designed for air-conditioning and intermediate industrial cooling applications where a low industrial cooling applications where a low profile is desirable, these series were developed to offer greater cooling capacity in smaller space with lower operating costs.

Salient features:

- More efficient PVC film fill
- Double hot water distribution system
- Lower overall profile and pumping head
- Stainless steel fill support system
- No framing obstructions in fill area
- Industrial duty mechanical equipment

Electricity Generation and Large Industrial Applications

A broad range of cooling towers is available, designed specifically for rigorous duty encountered in producing electricity, fertilisers and those products related to petroleum refining, petrochemical, process chemical and general manufacturing. A continuous research and development programme matches customer requirements with the best materials and techniques, including environmental compatibility, closer evaluation of energy cost, and changing availability of basic materials.

Class 400 Wood, FRP, Steel and Class 800 Concrete

In keeping with the Paharpur tradition, the Class 400 Wood cooling tower advances the state-of-the-art in its category. Designed for dependability, durability and operational simplicity, the Class 400 tower evolves from an impressive ancestry of counterflow towers. The Class 800 concrete rectangular mechanical draught tower retains all the advantages of the Class 400 and adds to them the durability and non-combustibility of concrete. Available in inline and back-to-back configurations with PVC film fill and the famous Paharpur mechanical equipment. Standard drift eliminators are also PVC. PVC film fill results in remarkably low pumping heads. All this improved technology has resulted in the current standard of counterflow cooling tower design. Also available in pultruded FRP – designated as Class F400, and in stainless steel – Class S400.

Class 500 Wood and FRP

A versatile cooling tower available in a wide selection of frame sizes to efficiently serve application requirements in large process cooling and air-conditioning projects as well as in intermediate size power stations. Product features include: Paharpur-built components – designed and manufactured for cooling towers; pressure-treated wood structure – providing high strength and proven longevity; crossflow design – providing the most efficient fill configuration, allowing longer water / air contact with more cooling per unit area; FRP fan cylinders – specially designed for higher efficiency; gear reducers and fans, designed and manufactured for efficient long life under hot and moist, highly corrosive conditions.

Class 600 Wood and FRP

This crossflow tower incorporates just about every design advantage that has been conceived over the years, providing thermal performance, low drift for today's environment, and minimal long term maintenance cost. Both single and double air entry configurations offer mechanical, structural and operational advantages which result in greater efficiency, lower maintenance and longer service life. Available with PVC or treated wood splash fill in virtually unlimited capacity.

Class 1000 Concrete

Class 1000 towers are concrete structure, mechanical draught in a low profile configuration. The primary design features are: non-combustibility and a unique design that offers compact siting, reduced piping and water supply economy. Precast and prestressed structural components reduce construction time. Paharpur-made mechanical equipment. Choice of treated wood, concrete and plastic fill for longevity and durability.

Natural Draught

These towers are suitable for the very largest heat load applications. Hyperbolic natural draught towers may be specified where: (i) geography dictates maximum height release of the moist air plume (ii) the site has a confined restricted area (iii) extremely high power cost makes natural draught most applicable. Attendant advantages of hyperbolic towers are simplicity of operation – since no mechanical equipment is used – and total avoidance of heated air recirculation, as plume dispersion is at considerable height. The towers are available in both counterflow and crossflow design. Fill options are prestressed concrete and PVC / PP (splash-type) and PVC (film-type). The design of these towers is supported by technical know-how from K.P. Energy, South Africa & USA.

Air-Cooled Heat Exchangers

Paharpur's heat transfer specialists, wide-ranging production, and application and testing experience combine to produce the quality products of the Paharpur AirCooler line.

Quality is the byword at Paharpur. In terms of equipment, quality means the latest tube finning machines, manual and automatic welders, radial drills and, of course, computer-controlled machining. Paharpur has access to first class stress relieving facilities. In terms of personnel, quality is reflected in the seasoned knowledge of specialists and the skilled hands of craftsmen.

Four types of finned tube construction are available – tension-wound footed, tension-wound double footed, embedded edge-wound and extruded. Paharpur engineers can provide forced or induced draft models, with one or two fans per bay, in any cooling capacity. Material selection includes carbon steel, stainless steel, Inconel, Cupra nickel and Admiralty.

Paharpur's thoroughly sophisticated engineering and manufacturing resources and its standard of excellence and reliability in heat transfer equipment stand behind every product of Paharpur.

A variety of key industries are served by Paharpur AirCoolers, each custom-engineered for the particular application, utilising components specifically designed for air cooling duty. Supported by knowhow from HTRI (Heat Transfer Research Institute).

Paharpur AirCoolers are designed, manufactured and tested by Paharpur's team of experienced engineers and skilled technicians to solve today's unique and even more complex process cooling demands. To meet these requirements, the Paharpur product team can provide exchangers of virtually any capacity, metallic alloy or pressure range. As a result, Paharpur products are found in hundreds of applications throughout the chemical, petrochemical, petroleum, power, gas pipeline and other industries. Paharpur's air-cooled steam condensers are supported by world-class know-how and capability. They are ideal for small and medium-sized power plants, and help to locate plants where they are needed – even if there is no water available.

Air-Cooled Steam Condensers

The unique Divided Rear Header (DRH) design used in Paharpur air-cooled condensers offers the following advantages over the dephlegmator type of configuration:

- Each row is evacuated separately – hence no chance of vapour locking.
- There is flexibility to handle off-design conditions at partial load.
- Rear headers can be lifted without dismantling the bundle – hence leakages can be easily identified and repaired.
- Progressive thermal expansion can be accommodated in the tube layout pattern.
- Unequal condensation across the bundles is compensated by varying the finned tube diameter.

The condenser tubes are available with extruded, embedded or wrap-on type fins. The fins may be of aluminium or galvanised steel.

A variety of tube cleaning systems can be supplied – from simple manual types to sophisticated automatic types.

When it comes to air-cooled condensers, you don't have to look beyond Paharpur.

Single-Row Condensers

Launched in 2012, single-row condensers are the latest in ACC technology from Paharpur, and are set to take the Indian ACC industry to the next generation.

With their special aluminium-clad, oblong carbon steel tubes and high-efficiency, dimpled aluminium fins, single-row condensers are easier to maintain, take up less space and are more suited for large applications in the power industry.

Single-row condensers will be complemented by Paharpur's rugged gearboxes, fans and other, time-tested components.

With this new single-row condenser technology, Paharpur has taken yet another step in redifining dry cooling technology in India, allowing power plants of any size to be located where they are needed, even if water is not available.

PRODUCTS - SPG Dry Cooling

SPG DRY COOLING

Air-Cooled Steam Condensers (ACCs)

The SPX Dry Cooling Air Cooled Condenser features long-term mechanical and thermal integrity, excellent corrosion and freeze resistance, low fan power consumption, reliable operation and low maintenance.

The typical scope for an ACC installation includes the supporting structure, the steam ducting from the steam turbine interface, auxiliaries such as the condensate and drain pumps, condensate and duct drain tanks, the air evacuation units and related piping work and instrumentation.

Hexacool® Air Cooled Condensers

Hexacool is an air cooled condenser (ACC), well suited for use in waste to energy, biomass and small size electrical power plants and industrial co-generation.

For small power and industrial applications, Hexacool ACC has been developed with the goal of offering a standard modular system that would be low in cost, easy to erect and robust in performance.

ModuleAir® Air Cooled Condensers

ModuleAir® is an innovative modular A-frame air-cooled condenser design featuring factory assembled structural components, duct and modular heat exchanger bundles with construction saving of up to 25% when compared to a standard A-frame design.

Indirect Dry Cooling

Indirect Dry Cooling (IDCT) systems have been used for over 50 years for various applications in the power industry. Active for more than three decades in the indirect dry cooling market, SPX Dry Cooling (before becoming a member of Paharpur family) has supplied the largest indirect system presently in operation in the world.

BoxAir Air Cooled Condensers®

BoxAir Air Cooled Condenser is an innovative Induced Draft Air Cooled Condenser (ACC) suitable for all power plants ranging from 1 to 30 MWe.

BoxAir ACC® is an ACC type, integrating standard boxes that are easy to erect. The extended standardization enables us to insure a very short delivery schedule, and a high reliability level.

BoxAir ACC®'s typical applications are waste incineration plants, biomass, solar and geothermal power plants, or capacity increase of any existing power plant.

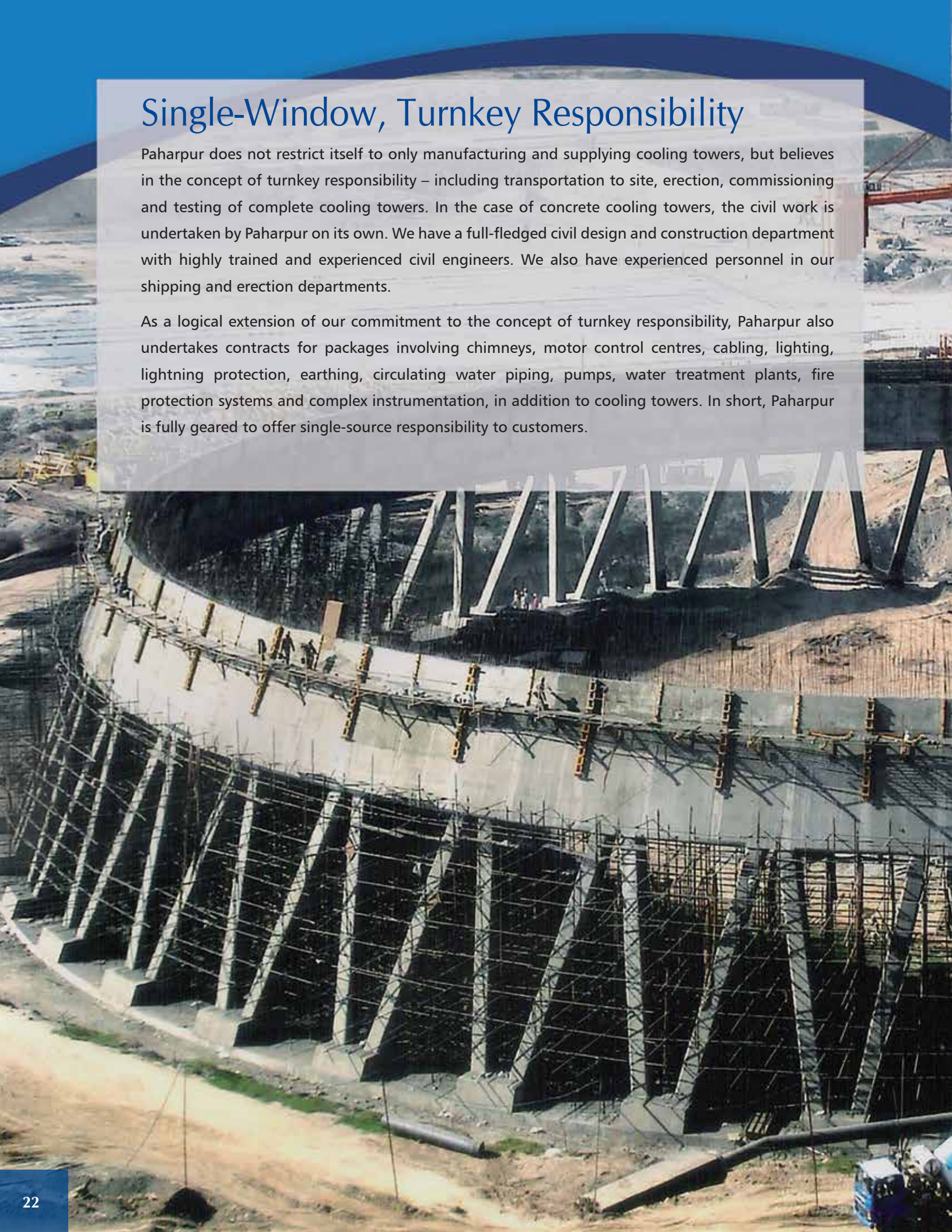
W-Style Air Cooled Condensers®

Our W-Style Air Cooled Condenser is an innovative Induced Draft Air Cooled Condenser (ACC) directly condensing the steam turbine exhaust flow. The condensate returns tot he boiler without water loss, as in traditional ACC. With its unique "W" heat exchanger arrangement, the amount of structural steel and overall ACC height are dramatically reduced as compared to traditional forced draft arrangements. With its reduced finned tube length as compared to other ACCs, reduced ACC back pressure can be achieved and flow accelerated corrosion risk notably reduced.

Single-Window, Turnkey Responsibility

Paharpur does not restrict itself to only manufacturing and supplying cooling towers, but believes in the concept of turnkey responsibility – including transportation to site, erection, commissioning and testing of complete cooling towers. In the case of concrete cooling towers, the civil work is undertaken by Paharpur on its own. We have a full-fledged civil design and construction department with highly trained and experienced civil engineers. We also have experienced personnel in our shipping and erection departments.

As a logical extension of our commitment to the concept of turnkey responsibility, Paharpur also undertakes contracts for packages involving chimneys, motor control centres, cabling, lighting, lightning protection, earthing, circulating water piping, pumps, water treatment plants, fire protection systems and complex instrumentation, in addition to cooling towers. In short, Paharpur is fully geared to offer single-source responsibility to customers.



Additional Services

Paharpur is dedicated to serving the needs of customers – needs which are far in advance of the actual purchase of a new cooling tower and vary over the operating lifetime of the project. In order of probable occurrence, the additional services offered by Paharpur are as follows:

1. Application / Sizing / Layout Service – Paharpur Field Application Engineers are trained to assist you in choosing the proper type and size of cooling tower, and will guide you in its appropriate location on site. They will also help you write the specifications for its purchase. Being the only manufacturer who makes all types of cooling towers, Paharpur can be totally unbiased in pursuit of your requirement.

2. Construction Service – Paharpur undertakes turnkey responsibility for civil construction and mechanical erection of your cooling tower, finishing up with the final testing and commissioning of the completed tower, freeing you to look after the rest of your project.

3. Parts Service – Paharpur maintains a stock of spare parts for your specific tower. You will not be at the mercy of an outside vendor, because all of the parts required (except for the motor) are designed and manufactured by Paharpur.

4. Maintenance Service – In addition to providing complete instructions and continuing guidance, Paharpur will provide as much "hands-on" maintenance as you require.

5. Condition Service - From time to time, for your peace of mind, Paharpur can give your tower a thorough inspection to evaluate its current condition. This usually allows you to foresee and forestall problems before they become serious.

6. Reconstruction Service – Due to operating or atmospheric conditions, or age, sooner or later your tower will be in need of repairs above and beyond those categorised as normal maintenance. Paharpur's reconstruction service can return your tower to grade-A condition.

7. Performance Improvement Service – Systems served by cooling towers grow in response to demand for the product produced by that system. In most cases, customers find that more product could be produced if the cooling towers were capable of delivering colder water. Fortunately, cooling tower technology advances with time and Paharpur can apply the technology gains to upgrade your tower's thermal performance.

8. Tower Replacement Service – Occasionally customers will find it of greater advantage to them to replace an existing tower than to attempt refurbishing. Paharpur stands ready to assist you in that endeavour, and, in most cases, the replacement will require little or no change in your concrete basin or support structure.

9. Cooling Tower Information Service – It is Paharpur's belief that the more informed customers are, the more easily their needs can be recognised and served. Regular mailing of technical bulletins works to our mutual advantage. To place your name on our mailing list, please write to our Corporate Communication & Marketing Support Services Division.

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