











Paharpur Cooling Towers is the world's only manufacturer with the complete range of wet & dry cooling technology. This makes us especially capable of providing the ideal customised solution for you.

# IN WET & DRY COOLING TECHNOLOGY

**62,000+** installations worldwide

In locations at -50°C to +50°C

With a total installed capacity of **11,080 billion** litres per day

Paharpur Cooling Towers' remarkable journey to the pinnacle of cooling tower manufacturing started in 1957. Over the years, we have designed, produced, customised and refined our

products to deliver high performance inspite of changing operating conditions and our products have driven the productivity of industries across the world.



India's largest airports-Delhi, Bombay, Kolkata, Chennai and other metros have relied on Paharpur. In fact, the entire Delhi Metro Rail runs on Paharpur towers

Over the last 6 decades, Paharpur has consistently delivered some of the most innovative solutions to challenging projects all over the world. The most prestigious companies the world over rely on us because we are dedicated to high thermal performance

and accuracy in design & manufacturing.
With in-depth understanding of your process and our technology, Paharpur is equipped to provide you with customisations which turn operational challenges into operational advantages.



**PAHARPUR CONTRIBUTES GREATLY TO** 

# BUILDINGS

Cooling systems in commercial buildings can be challenging. You require a combined solution that will meet the challenge of strict sustainability standards, long-term concerns and high energy costs. With Paharpur, you can achieve them all and build the commercial space of the future.



Typically, HVACR systems use more than 40% of a commercial building's energy. You need a solution that turns the table on cooling system economics

DESIGNATION OF THE PARTY.

and gives you complete control. Paharpur can greatly contribute to the technology of the future; we have heavily invested in finding

sustainable solutions and our energy efficient cooling systems will contribute to the making of truly smart buildings and consequently, smart cities.





When operating costs comprise 80% of the life-cycle-cost, energy savings become a vital concern.

### SAVE ENERGY EVERYDAY

Paharpur helps you save power in two ways-

- Reliable and precise thermal With the complete range of characteristics maintain high efficiency and unburden the cooling system, hence conserving power and saving operating cost.
  - cooling technology, we are the only ones who can give you complete control with highly customised solutions tailor-made just for you.









Approach as Low as

Paharpur's Lowproach® towers are the highest performing towers in the industry.
Only Paharpur can promise you 1°C approach.

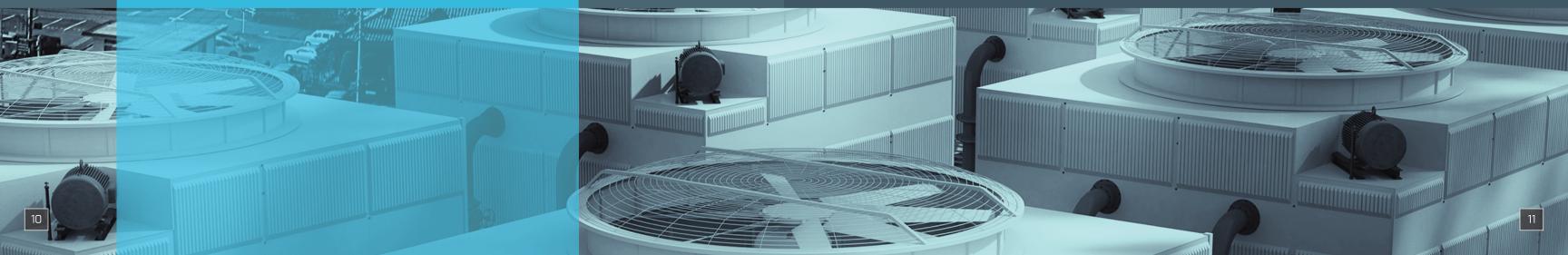
A 1°C Approach tower helped Paharpur Business Center achieve a Platinum LEED rating. It was India's first retrofitted building to receive such a rating.

### JNPARALELLED

Put simply, Approach is a measure of cooling tower performance. Lower the approach, better the performance and lower the chiller power consumption.
Our Lowproach® towers are

pioneering products that deliver matchless performance, bring down operating costs and are completely dependable even in the toughest conditions.

- Reduced chiller power consumption.
- Unique thermal design for high performance.
- Reduce energy cost every day.
- Less than 12 mon payback period.









Series CF3

# OUTPERFORMING THE COMPETITION



This CTI-certified asset is just what you need to ensure high performance at low operating costs.

The Series CF3 reduces chiller power consumption and hence operating costs. Over the years, enhancements to its integrated system design have made the CF3 a heavy-duty, energy efficient and reliable performer unsurpassed in its class.

- Complete pultruded FRP structure.
- Integrated system design.
- Highly reliable thermal performance.

Gear reducers with more than 95% efficiency.

### FEATURES

Oraught	Flow	Material of construction	Water Flow	Fill	Drive
Type	type		rate (cmh/cell)	type	type
nduced	Counterflow	FRP	65 - 1000		Gear

Pultruded FRP Structure prevents corrosion and increases life.







### Series OXF-30K

### PERFORMANCE FIRST

Minimum Downtime India's only CTI-certified crossflow tower. The OXF-30K has a one-of-a-kind octagonal design that sets it aside as a unique product which blends seamlessly in your advanced commercial environment. Owing to its quad-flow design, it has a very low profile, which presents its

advantages in situations where a low height tower is required. An access hatch through the bottom provides access to the tower even during operation and makes online maintenance possiblea great asset which minimises downtime.

- CTI-certified.
- Highly efficient fill system.
- Unique octagonal design.
- Proven fill with integral louvres and drift eliminators.
- Online maintenance.
- Quad-flow design allows low profile.

### FEATURES

Oraught Type	Flow type	Material of construction	l,	Water Flow rate (cmh/cell)	Fill type	١	Drive type
nduced	Crossflow	FRP		25 - 1250	Film		Gear





Series 6.1KF

### MAXIMUM COOLING N MINIMUM FOOTPRINT AREA





Turning operational challenges into operational advantages.

This double-flow crossflow tower exemplifies
Paharpur's dedication to high quality- our proven mechanical equipment is designed and produced in-house, specifically for cooling tower operation.

Target nozzles uniformly distribute water over efficient fill that reduce drift, and fan pitch can be adjusted to optimise utilisation of rated power.

- GRP and hot-dip galvanized steel prevent corrosion, elongate life.
- Reduces drift to less than0.005% of water flow.
- Adjustable blade pitch to maximise utilisation of rated power.
- Easy customisation to changing water flow rates.

Online maintenance.

### FEATURES

Draught Type	1	Flow type	I	Material of construction	l <sub>ra</sub>	Water Flow ate (cmh/cell)	Fill type	-1	Drive type	
Induced		Crossflow		FRP		40 - 1100	Film		Gear	







## THE ULTIMATE COMPACT & MODULAR COOLING SOLUTION



High efficiency and low downtime; ideal for commercial spaces.

Paharpur designed the CF-I with the sole objective of attaining maximum cooling in a minimum plan area. Our R&D team has conceived and produced a PVC fill with a unique repeating chevron configuration that minimises

maximises cooling capacity per volume with lower energy consumption.

- chevron pattern to maximise cooling.
- Easily available spares.
- Unique fill design with a Low pressure loss results in economic operation.
  - Long service life.
- Resistant to water borne contaminants.

### FEATURES

Draught Type	Flow type	1	Material of construction	I	Water Flow rate (cmh/cell)	Fill type	-1	Drive type
Induced	Counterflow		FRP		10 - 200	Film		Direct







### UNMATCHED PRECISION & RELIABILITY



Integrated
system design
enhances
performance &
reduces
downtime by
simplifying
maintenance.

We leverage our manufacturing experience to provide effective cooling solutions like the CF-II to our clients. CF-II's fibreglass and HDG build protects against corrosion from dirty water and elongates an already long service life. An especially efficient gearbox and time-tested mechanical equipment guarantee the

high performance that you have come to expect from Paharpur. Vacuum formed PVC sheets are solvent welded to provide maximum heat transfer with minimum pressure drop and pump head. As you will see, everything about the CF-II is designed to provide maximum benefits to you.

- Adjustable blade pitch to maximise utilisation of rated power.
- Gear reducers with more than 95% efficiency.
- Spray nozzles are high temperature resistant.

### FEATURES

Draught Type		Flow type		Material of construction	Water Flow n   rate (cmh/cell)		Fill type	Drive type	
Induced	1	Counterflow	I	FRP		60 - 640	1	Film	Gear/Direct





Series **AQ-**3800

# MINIMISING DOWNTIME MAXIMISING PROCESS OPTIMISATION

Unique uni-flow design for minimal pressure drop. This tower's design simplifies maintenance while still delivering high performance, making it the standard of packaged cooling towers. Its latest models consume less energy, improved fill performance and are made of corrosion-free fibreglass.



Integrated system design.

 Mechanical parts can be fully inspected without climbing the tower.

### FEATURES

Draught Type	Flow type	Material of construction	Water Flow rate (cmh/cell)		Fill type	Drive type
nduced/ Forced	Crossflow	FRP	3 - 200		Film/Splash	Belt

Horizontal discharge allows discharge to be faced away from





Series QF-20K

### ONLINE MAINTENANCE



Low Sound Operation A unique quad-flow design & low profile make it ideal for commercial spaces.

FRP structure.

The unique quad-flow crossflow and low profile tower delivers high performance consistently, even in tough operating conditions. The quad-flow design of the tower allows for a low profile design, which makes it especially suitable for use in situations

where a low height tower is needed. Adjustable fan blade pitch maximises utilisation of rated power. Maintenance is simplified by an access hatch at the bottom of the

Online maintenance.

<ul><li>Gear reducer than 95% ef</li></ul>	rs with more	design.  Highly reliable thermal performance.		
FEATURE	S			
Draught Type	Flow	Material of Water F	low Fill cell) type	Drive type







## STATE-OF-THE-ART COUNTERFLOW COOLING TOWER DESIGN



Turning operational challenges into operational advantages.

The 9KF is made of pultruded FRP, which is far superior to HDG steel when it comes to corrosion resistance. This counterflow series exemplifies Paharpur's dedication to

high quality and is the result of decades of continuous design improvements. Fan cylinders, spray nozzles and PVC fill are designed to maximise cooling and deliver high efficiency

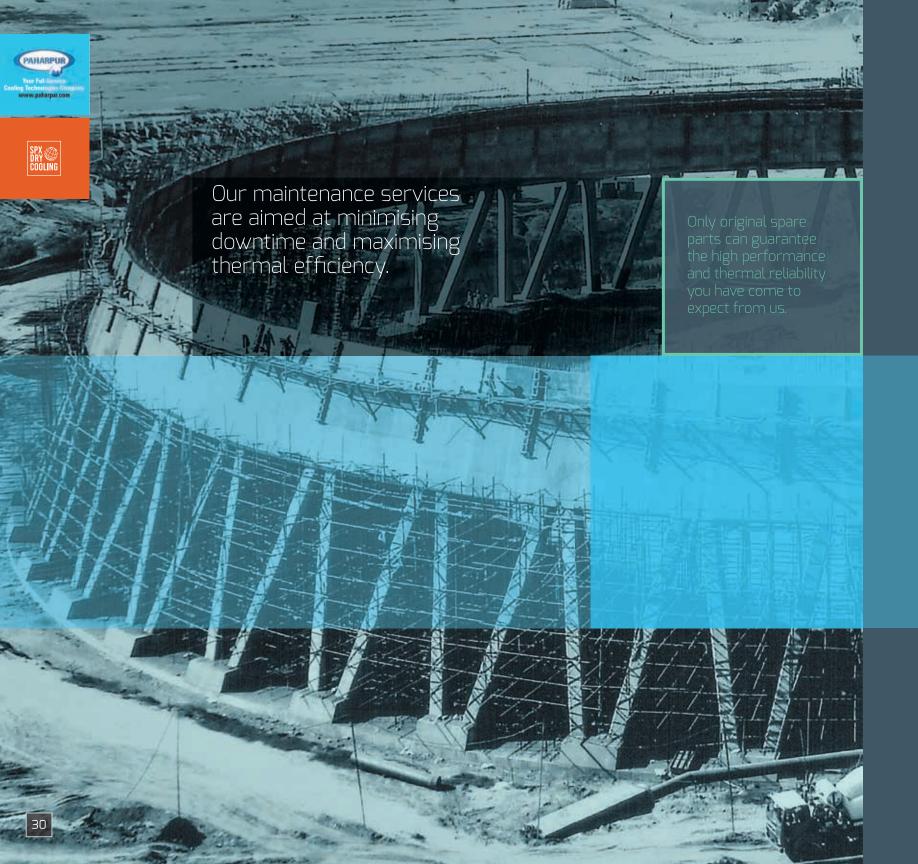
- Pultruded FRP prevents corrosion and increases life.
  - Reduces drift to less than0.005% of water flow.
- Adjustable blade pitch to maximise utilisation of rated power.

### FEATURES

Draught Type	Flow type	I	Material of construction	l <sub>r</sub>	Water Flow rate (cmh/cell)	Fill type		Drive type	
Induced	Counterflow		FRP		65 - 1000	Film		Gear	

Pultruded FRP Structure prevents corrosion and increases life





Paharpur leads the industry not just with expert manufacturing but also with a complete 360° service portfolio that revolves around preserving high performance and minimising downtime.

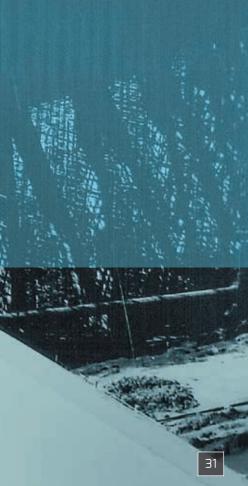
Our services go well beyond just repair and maintenance.

Paharpur can conduct service visits to foresee and forestall operational hurdles, increase cooling capacity and even upgrade your cooling system. Regular maintenance and service visits allow us to foresee andt forestall operational hurdles.



# 360° SERVICE & SUPPORT

Rely on the industry leader for world-class service, anytime, anywhere. We produce all spares and components in-house and an integrated system design ensures that the system performs seamlessly.





### SPX @ DRY COOLING

### **SOME OF OUR PROMINENT HVACR INSTALLATIONS**

Paharpur's HVACR end-clients read like the who's-who of their industries. Some of our prominent installations amongst tens of thousands worldwide:

### Metro Railways

Paharpur serves the entire cooling needs for:

Jaipur Metro Lucknow Metro Kolkata Metro

Hospitals

Delhi Metro

Lilavati Hospital, Mumbai

Ram Manohar Lohia Hospital, New Delhi

St. John's Medical College Hospital, Bengaluru

Medica Superspecialty Hospital, Kolkata

### **Shopping Malls**

Ambience Mall, Gurgaon Quest Mall, Kolkata South City Mall, Kolkata Spencer Plaza, Chennai Inorbit, Mumbai

### Airports

Indira Gandhi International Airport, New Delhi

Dubai International Airport, Dubai

Netaji Subhas Chandra Bose International Airport, Kolkata

Rajiv Gandhi International Airport, Hyderabad

### Hotels

The Taj Mahal Palace & Tower, Mumbai

Shangri-La's - Eros Hotel, New Delhi

JW Marriott, Kolkata

ITC Sonar Bangla, Kolkata

### Universities

IIT, Chennai AIIMS, New Delhi IIM, Kolkata



Your Full-Service Cooling Technologies Company www.paharpur.com

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