

TRUWATER™

CF SERIES COOLING TOWER

SINGLE-CELL UP TO 6000m³/HR FLOW RATE

Large Counterflow Engineered Design



FIBREGLASS • WOOD • STEEL • CONCRETE



Member

CF Series Cooling Tower

presents the following unique customer benefits:

- **Guaranteed Thermal Performance**

We provide 100% thermal performance guarantee for CF series cooling tower. We shall certify that tower supplied meets the specified performance conditions when the tower is installed according to plans.

- **Design Flexibility**

CF series counterflow cooling tower has been engineered to deliver maximum heat transfer capability. Because of its counterflow design, CF tower has inherent advantages which can greatly reduce space requirement of tower on by utilizing advance computer software, TRUWATER engineering team custom design each system according to your specific requirements.

- **Minimum Energy Consumption**

We can choose from the industry's most efficient tower components to obtain high performance capability. For example, by selecting the most efficient film type fills, high heat transfer rate can be achieved; choosing the right fan assembly will greatly improve tower efficiency; etc.

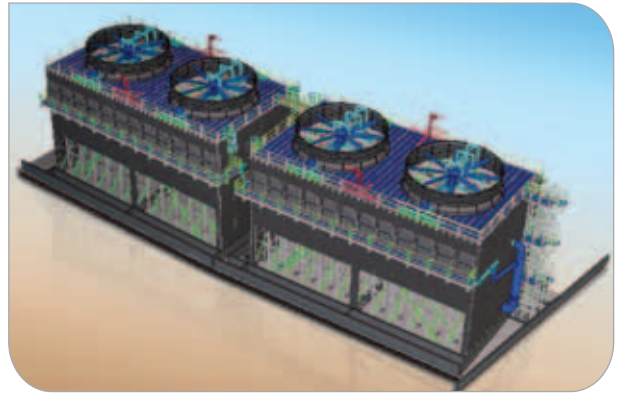
- **Extremely Long Service Life**

CF series cooling tower utilizes only components which are manufactured from the finest raw materials and have been proven to be reliable in the field. All components are carefully selected for their corrosion resistance and suitability for cooling tower applications.

- **Reduce visible plume**

If your site conditions require, we will design a Hybrid Cooling Tower to reduce unwanted plume from the cooling tower, the Hybrid Cooling Tower mixes moist air with dry air to reduce the plume effect.

TRUWATERTM



:: Marina Sands, Singapore, 12,500 m³/hr.



:: Seguntor, Sabah, 3,500 m³/hr.



:: Global Biodiesel Lahad Datu Sabah, 2,000 m³/hr.



:: Malacca Cogen Power Plant, 12,500 m³/hr (5 cells).



:: Bangpakong Combined Cycle Power Plant, Thailand 35,800 m³/hr (12-cell back to back).



:: Megasteel Malaysia, 21,000 m³/hr (6 cells).



:: Antara Steel Labuan, 3,400 m³/hr (4-cell back to back).



:: Palm Jumeirah Trunk Dubai, 22,660 m³/hr.



:: Bangkok International Airport, 12,000 m³/hr (5 cells).



:: IPG Gas Singapore, 1300 m³/hr/cell.



:: CUP II, Thailand 16,800 m³/hr.



:: 9.9MW EFB Power Plant Surathani, Thailand 2,500 m³/hr.

CF Series Features

• 3 D Modelling

Utilizing advanced TEKLA Structures 3D Modelling System Software, our engineering team custom design each system to meet your specific project requirement.

• Innovative Design

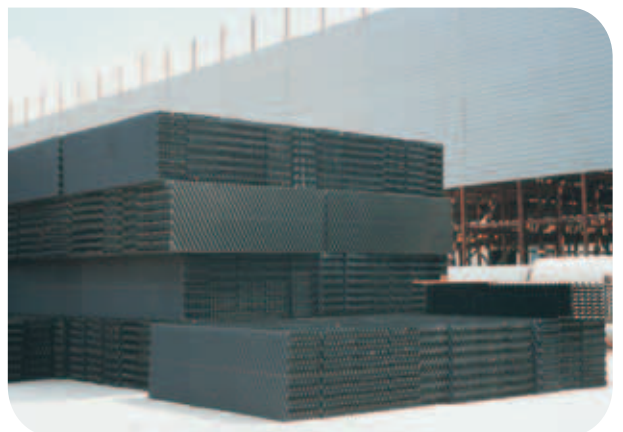
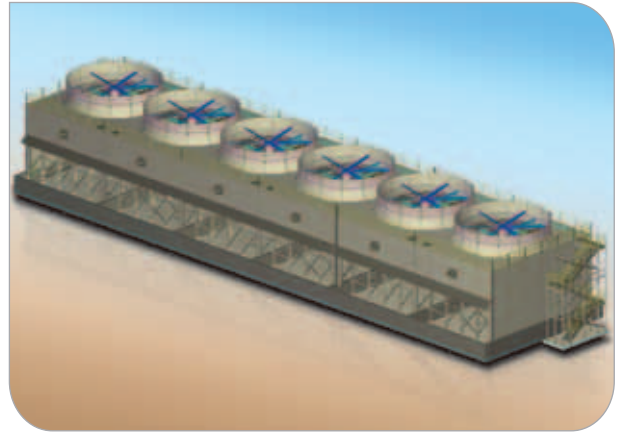
Truwater's vast experience and resources enable us to design state of the art cooling systems which are proven performers in the field. Our innovations include all the FRP Pultruded Structural Cooling Tower which provides long useful life from a high strength non-corrosive monolithic structure, without depleting our precious forests.

• Mechanical Equipment

High efficiency fans and corrosion-resistant material are selected. Fans are driven by spiral bevel gear reducers selected with a minimum AGMA service factor of 2.0. Motors are furnished according to customer's specification and are mounted outside the discharge air stream. Driveshafts are built from stainless steel or advance composite material and are dynamically balanced at the factory to minimize operating vibrations. Fan cylinders feature velocity-recovery design made of FRP material.

• High Performance Heavy Duty Fill

Fill or heat transfer media is the most important component of CF Series Safety Maintenance Cooling Tower. The high performance heavy duty PVC fill maximizes cooling efficiency and horse-power requirement.





CF Series Features

• Drift Eliminators

CF Series utilizes a 3-pass, sinusoidal drift eliminations with very low pressure drop while still maintaining excellent drift droplet removal capabilities.

• Water Distribution System

FRP or PVC header pipe coupled with PVC lateral pipes with non clogging polypropylene nozzles distribute water evenly over the entire full surface. The water distribution system requires very little maintenance and minimal operating pump head.

• Access & Safety

Handrails are provided around the fan deck perimeter. Each tower includes a vertical ladder as standard. Free standing stairway can be provided as option. A hatch in the fan deck allows access to the drift eliminator and water distribution area by means of built-in ladder. Each gear reducer is equipped with extended oil line outside fan cylinder with sight glass and level indicator. Fan cylinders are equipped with removable access door. Drive shafts are protected with coupling guards to restrain the shaft in the event of a coupling failure.

Other Features :-

- Motor
- Drive Shaft
- Gear Reducer
- Casing
- Fan Cylinder
- Safety Maintenance Platform

CF Series Support & Services

• Engineering

We employ computer programs and CAD techniques in our engineering to provide quick response to our customers.

Our computer programs cover the following:

1. Multipurpose counterflow design program.
2. Multipurpose crossflow design program.
3. Counterflow (and crossflow) performance curve calculation & display.
4. Plume Abatement System design program.
5. Test interpretation program to calculate the test results according to the CTI Code ATC-105.

We can supply cooling towers with design complying with CTI, DIN, BS or JIS requirements.

• Quality Control

We carry out inspection of tower components and part according to our QC program. Tower materials such as wood, steel, fibreglass and plastics will be inspected as per our quality control procedure. Equipment such as fan assembly, gearbox, motor and drive shaft will be tested jointly with the manufacturer of each equipment. We assure that items supplied are in conformance to our engineering standards and contract requirements.





CF Series Support & Services

• Field Erection

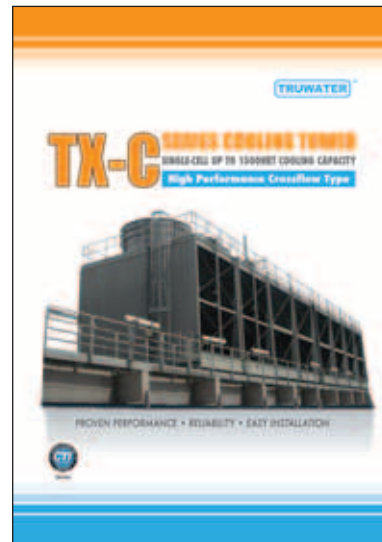
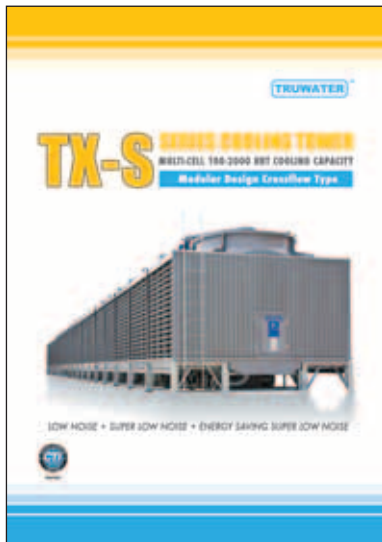
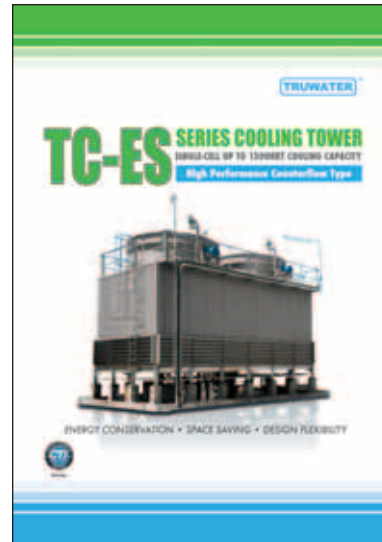
Our erection crews are well-trained and have sufficient knowledge and skills to undertake erection contracts with full confidence. Prior to physical erection work we will pay special attention to the erection schedule and establish a critical path. Our supervisor will also identify all governing regulatory requirements related to construction practices, building codes, and safety requirements. He will survey the availability of staging space, equipment availability, manpower strengths and skill level, as well as factors such as prevailing weather conditions which may affect the erection methods and scheduling.

• Tower Inspection & Upgrading

We provide cooling tower inspection to investigate and analyse your existing tower conditions. Our experienced engineer will report to you the overall physical appearance, current level of thermal operation, structural condition, mechanical equipment status and upgrading potential after each inspection.

We apply modern upgrading or retrofitting techniques to maximize the performance of your cooling tower. Our approach involves a step-by-step investigation; namely, pre-testing of the tower-physical inspection-analysis-engineering-fabrication-construction-and post-testing to determine the degree of improvement achieved.

OTHER PRODUCTS



TCT/B/005

TRUWATER

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