The All-Fiberglass Cooling Towers

High Performance & Quality with Maximum Durability

RT Series
RT, RTM, RTU, RTG & RTGM Models

THERMAL PERFORMANCE CERTIFIED BY THE COOLING TECHNOLOGY INSTITUTE
REYMSA’s commitment for 50 years is to build only the best cooling towers for both the commercial and industrial cooling tower markets and providing solutions to our customer’s needs. This has made REYMSA the leader in high grade fiberglass cooling towers.

**LONGER LIFE SPAN**
REYMSA’s all high-grade fiberglass construction will deliver a tower with at least 2 times the life span of a galvanized steel tower.

**MINIMUM MAINTENANCE**
High quality and corrosion resistant materials help to reduce maintenance time and costs.

**ENERGY SAVINGS**
Low consumption of energy per ton, since our towers exceed the minimum energy requirements in ASHRAE Standard 90.1.

**TOP GUARANTEE**
REYMSA offers you a premium warranty among the longest in the industry!
Design Features

Durable Heavy Duty Construction

All Fiberglass and Seamless Construction
Offers long service life, minimum to zero maintenance and no water leaking problems.

Longer Life Span
REYMSA’s all high-grade fiberglass construction will deliver a tower with 2 times the life span of galvanized steel tower.

Modular Configuration
For increased capacities and to accommodate any heat load.

Small Footprint
Offers excellent performance in a compact footprint.

Low Environmental Impact
Our equipment and motors are designed to conserve water and save energy. Meet or exceed ASHRAE Standard 90.1 efficiency requirements.

Low Sound & Super Low Sound Fan
REYMSA offers these optional models for sound sensitive areas.
The Best Choice

High durable construction materials
FRP has proven it’s durability in cooling towers over the last 40 years. FRP is replacing treated wood as the material of choice for structural framing easily more than doubling the expected life of large industrial field erected cooling towers.

A simple analogy can be used to have a clear understanding of FRP properties:

The polyester resin can be seen as the cement and the fiberglass as the reinforced bars in a concrete construction. REYMSA adds several layers of thick high grade fiberglass woven mats that results in the structural integrity that REYMSA’s customers have come to depend on.

Great chemical and weather resistance
REYMSA only uses the highest quality isophthalic polyester resin that offers the best resistance to UV, chemical and hard water attacks. REYMSA recommends using 30 years for life cycle cost analysis based on CTI Guideline 152*. REYMSA’s experience as well as our supplier’s is that using our high grade isophthalic polyester resin will have a much longer undetermined life.

There is an industry trend towards non-chemical water treatment systems that provides for less make-up water and higher cycles of concentration. However these higher cycles of water concentrations results in levels of chloride that steel towers (galvanized or stainless) cannot tolerate. This is not a concern for REYMSA Cooling Towers owners.

* CTI Guideline 152, page 5 of 16, section 1.3: “Life of Structure - A reasonable anticipated life of 30-35 years can be expected from an FRP structure tower”.

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Corrosion resistance
Proven to be an excellent material against aggressive chemical water treatment.

Minimum maintenance required
Only for appearance purposes, such as cleaning dust and waxing the tower casing.

Very easy to work with
FRP can be repaired to its condition with high grade resin material readily available everywhere.

Stability
FRP expands and contracts like stainless steel. However, unlike steel towers that use caulked seams in the cold water basin, REYMSA has a seamless cold water basin and body casing that eliminates the possibility of leaks.
RT Series Models

The RT Series has a variety of models to satisfy our customer’s needs as they fit the requirements for any application.

**RT Models**
- Induced Draft, Counterflow.
- 25 - 1471 Nominal Tons*.
- One, Two or Four fans with Direct Drive System.
- Offers excellent performance in a compact footprint.
- Low Sound & Super Low Sound fan option.

**RTM Models**
- Induced Draft, Counterflow.
- 250 - 733 Nominal Tons* each module.
- Two fans with Direct Drive System.
- Low Sound & Super Low Sound fan option.
- Modular configuration for increased capacities and to accommodate any heat load.

**RTU Models**
- Induced Draft, Counterflow.
- 25 - 780 Nominal Tons*.
- One, Two or Four fans with Direct Drive System.
- Reduced height - can be transported in shipping containers.
- Offers excellent performance in a compact footprint.
- Low Sound & Super Low Sound fan option.

* A Nominal TON is defined as 3 GPM of water cooled from 95°F HWT to 85°F CWT with a 78°F WBT.
RTG Models

- Induced Draft, Counterflow.
- 195 - 944 Nominal Tons*.
- Single Fan Gear Driven Models.
- Low RPM fan.
- Low Sound by design.
- Best cost per ton due to its large box with a low HP motor.

RTGM Models

- Induced Draft, Counterflow.
- 197 - 924 Nominal Tons* each module.
- Single Fan Gear Driven Models.
- Low RPM fan.
- Low Sound by design.
- Modular configuration for increased capacities and to accommodate any heat load.
- Best cost per ton due to its large box with a low HP motor.

All of our models provide the best resistance to:
UV, chemical and hard water attacks

* A Nominal TON is defined as 3 GPM of water cooled from 95°F HWT to 85°F CWT with a 78°F WBT.
Drive Systems

Direct Drive System
Available in RT & RTM models.
- Minimum service required.
- No belts to adjust, reliable operation.
- Fewer parts between the motor and the fan.

Gear Drive System
Available in RTG & RTGM models.
- Rigid shafts and permanently aligned housing guarantee alignment of the gears under load.
- All bearings are sized to meet or exceed the minimum life of AGMA and CTI.
- A non-corrosive composite drive shaft for external mounted motor available as an option.

REYMA’s larger tonnage towers will use multiple fan/motors that can be cycled independently to offer continued cooling tower operation if a motor should fail.
High Efficiency Components

Motors

All of our towers feature motors that exceed the Cooling Tower duty characteristics:

- Severe Duty.
- Marine Duty.
- Inverter Rated.
- Epoxy coated (internal and external).
- Premium efficiency motor.
- Cast iron construction.
- Inpro/Seal VBX bearing isolator for added protection.

Minimal risk of failure

Over 51% of motor malfunctions are caused by bearing failure due to entering contamination and lubrication loss. REYMSA motor bearings are protected by Inpro/Seal VBX to prevent the risk of failure.

The perfect protection

1 The Inpro/Seal VBX Bearing Isolator is a non-contacting, non-wearing, permanent bearing protection device, consists of a unitized stator and rotor that form a compound labyrinth seal with no wearing parts, manufactured in bronze for more extreme conditions. VBX ring blocks the transfer of vapor contamination created by heating/cooling of the bearing enclosure, maintenance free, zero energy consumption.
Improved Design High Performance Fan Blades

Adjustable pitch air foil or sickle blades molded with fiberglass reinforced polyamide in our cooling towers with Direct Drive System (RT, RTU & RTM).

Adjustable pitch air foil blades made of aluminum are used in cooling towers with Gear Drive System (RTG & RTGM).

Fill Media & Air Inlet Louvers

We use high quality PVC fill that is UV stabilized, resistant to weather exposure, chemical degradation from alkali, acids and biological attacks.

REYMSA provides triple pass PVC air inlet louvers, designed to:

- Minimize direct sunlight to the water.
- Reduce splash out - reduced make-up water and chemicals.
- Reduce noise while having low pressure drop that results in less fan motor energy consumption.
- The potential of algae growth is reduced, therefore reducing water treatment and maintenance cost.
- UV stabilized - longer service life.

Additional characteristics are its durability by being corrosion-free and impervious to chemical attacks.
Water Distribution System

Our hot water distribution system is manufactured from PVC to eliminate corrosion, assuring a long service life and maximum reliability. After the water distribution system is assembled, REYMSA test it for leaks with 40 psig water pressure.

Spray Nozzles

REYMSA uses 2 ½” N.P.T. nozzle with interchangeable internal components for its non-clogging design and its unique square water spray pattern.

The square spray pattern provides the best choice for a reliable fill coverage and results in an optimal thermal performance. This industrial nozzle handles flow rates of 10 times per nozzle more than the typical cooling tower nozzle and has over 30 years of experience in power plant and large industrial cooling tower applications.
Low Sound Solutions

Some applications will require that our cooling towers meet or comply with lower sound levels than our standard. The RT Series is available with our optional “Low Sound” and “Super Low Sound” level fan designs (for models with Direct Drive System). The sickle blades in these options considerably reduce the noise level.

If you have such an application, contact your local REYMSA representative for assistance in the proper cooling tower selection.

Features

- Direct Drive System
- Lower sound level.
- Adjustable pitch air foil or sickle blades molded with fiberglass reinforced polyamide.
- Lower RPM motors / fan design for additional sound reduction.
- Tower performance CTI certified.

The Gear Drive System available on RTG & RTGM models provides low sound by design.
Easy maintenance
Every REYMSA cooling tower includes an access door for complete access to both the spray water system and fill. No tools are required to open the access door. Removing the air inlet louvers gives the service people complete access to the cold water basin for inspection & cleaning.

Factory tests
Every tower is assembled and tested at our factory prior to shipment to ensure the tower is in optimal condition.

Easy Field Assembly
- REYMSA towers are shipped in modular sections, designed for fast assembly.
- Assembly is reduced to placing and bolting the fan duct and the body section.
- Easy assembly of all our towers results in lower installation costs.
Optional Equipment

Basin Heaters
Designed to provide freeze protection during shutdown or standby conditions. Includes heater element, thermostat, and low water level safety cutoff.

Electric Water Level Control
Includes water level controller, stilling chamber, and solenoid valve for make up water.

Davit / Hoist
For motor removal where crane access is difficult.

Air Deflectors
Made of a curved deflecting surface that redirects air and sound.

Access Ladders & Handrails
For safe access to fan assemblies (in stainless or galvanized steel).

External Mounted Motor
Motor mounted outside the airstream, connected by a drive shaft for easy access to maintenance.

Non-Skid Catwalk
Access platform for maintenance and servicing (in stainless or galvanized steel).

Flame Retardant Resin
Controls the spread of flame meeting the ASTM-E84 standard.

Vibration Cutoff Switches
Vibration switch interrupts the power to the fan motor, when triggered by excessive vibration or shock.

Shaft Grounding Ring
Shaft grounding is recommended (NEMA MG1 31.4.4.3) as an effective means of bearing protection for motors operated from inverter power.
**Centrifugal Separator / Sweeper Piping**

Mechanical device that uses the principle of centrifugal force and friction to cause the separation of suspended solids from liquids, effectively removing suspended particles larger than 40 microns from a variety of fluids.

**Fire Sprinkler**

Fire Sprinkler System option is designed to meet FM Global Standards.

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**Optional Colors**

REYMSA towers are available in several standard colors that match our customer’s needs.

- Light Gray
- Beige
- Gray

Special colors may be available upon request with additional cost.

- Eden Green
- Dark Bronze
- Mustard
- Colonial Stone
Construction Details

1. Fan Cylinder with Fan Motor Support
2. Fan Assembly
3. Motor
4. Body Section
5. Air Inlet Louvers
6. Basin Section
7. Cold Water Outlet
8. Hot Water Inlet
9. Overflow
10. Purge
11. Drain
12. Water Make-up
13. Access Doors

RT Model

RTU Model
RTG Model

1. Fan Deck with Duct
2. Fan Assembly
3. Motor
4. Body Section
5. Air Inlet Louvers
6. Basin Section
7. Cold Water Outlet
8. Hot Water Inlet
9. Overflow
10. Purge
11. Drain
12. Water Make-up
13. Access Doors

Operation Principle

A. Hot water inlet is distributed over the fill media through spray nozzles.
B. Tower fans draw ambient air into the tower, making contact with the water as it travels through the fill.
C. Heat transfer takes place between the water and the air in the fill media, resulting in latent and sensible cooling.
Sustainable Technology

Our Cooling Towers are designed to be sustainable and have a low environmental impact.

Water Conservation

Fiberglass materials support water treatment with higher cycles of concentration resulting in less purging, water waste and cost.

No toxic metals

Zinc, Nickel and Chromium found in metal towers are environmentally hazardous. The RT Series does not have any metal in contact with the open cooling tower water. Fiberglass material does not dissolve in water, resulting in zero contamination.
Energy efficiency

Our units exceed energy efficiency per ASHRAE Standard 90.1 to reduce operating cost.

Life cycles

REYMSA all fiberglass towers have at least 2 times the life span of a galvanized steel tower. This construction also comes with lower annual maintenance cost.