Revolutionary Refrigeration and Heating Industries of Eurasia

registration number (88924)

Cooling tower manufacturer

Up to 10,000 tons of refrigeration

Introduction of Members

Engineer Abolfazl Saadatmehr - Abdolbasir Kalandarzehi Pour

Masoud Kalandarzehi Pour - Hossein Saadatmehr

Our sincere efforts are to revive your wealth, peace and comfort.

Introducing the Revolutionary Refrigeration and Heating Industries of Eurasia

The Revolutionary Refrigeration and Heating Industries of Eurasia, with the aim of eliminating the shortcomings of existing cooling towers in the industry and related equipment (pallring, motor, body, drip catcher and electrical panel ...), has been able to produce unique cooling towers that with very low water and electricity consumption have the highest efficiency.

Construction of various types of cooling towers in open and closed circuits (5 unique tower models) that are available to you according to your needs and goals; All types of towers and pallrings of the Revolutionary Refrigeration and Heating Industries of Eurasia have international registration certificates.

This success is the result of 45 years of experience and trial and error, and now, thanks to God, we have achieved maximum efficiency and performance.

Section from the Resume of Engineer Abolfazl Saadatmehr Born: May 1, 1963 Started Working: 1979

Senior Supervisor of Heating, Ventilation, and Air Conditioning (HVAC) Systems

Senior Supervisor of Heating, Ventilation, and Air Conditioning (HVAC) Systems

National Gas Company of Khorasan Razavi

Khorasan Razavi Science and Technology Park, Khorasan Razavi Organization of Industries and Mines

Work Experience:

Tara Hotel, Farid Hotel, Didar Hotel

Ayan Hotel, Nouralreza (a) Hotel

Approval from the General Directorate of Standards

8 Inventions, Innovations, and Initiatives

5 International Patents

Cooling Tower Definition and Refrigeration Capacity

A cooling tower is a system that utilizes water to cool down processes in air conditioning systems, refineries, power plants, and other applications. Transformative Industries of Eurasia can provide you with various types of cooling towers (open and closed circuit) tailored to your specific needs in the shortest possible time using the finest materials.

Refrigeration capacity is the amount of heat that can be removed from one ton of water to convert it into one ton of ice in 24 hours under standard conditions. It is also the amount of heat that can be removed from one ton of water at 32°F to convert it into one ton of ice at 32°F.

Industries that use cooling towers:

Salt purification plants, Metal extraction mines, Cogeneration power plants, Hotels Hospitals, Cold storage facilities, Office buildings, Power plants, Food processing plants (jam, compote, rose water, etc.)
Plastic injection molding and extrusion machines, Candy and sweets factories Sugar factories, Iron and steel melting furnaces, Metal melting (copper, aluminum, lead, zinc) and forging plants, Petrochemical plants, Paint factories, Battery factories

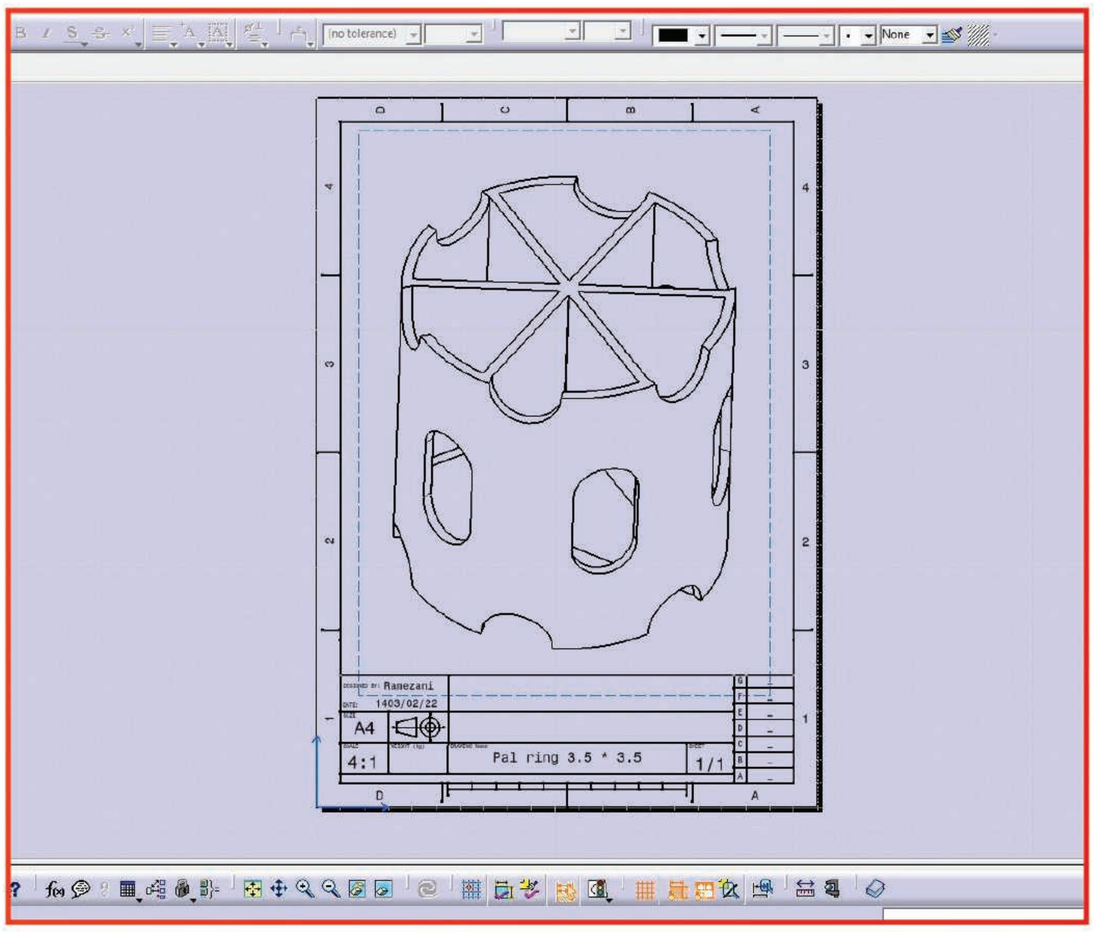
- ✓ Petrochemical industries
- ✓ Factories
- ✓ Power plants
- ✓ Plastic conversion industries

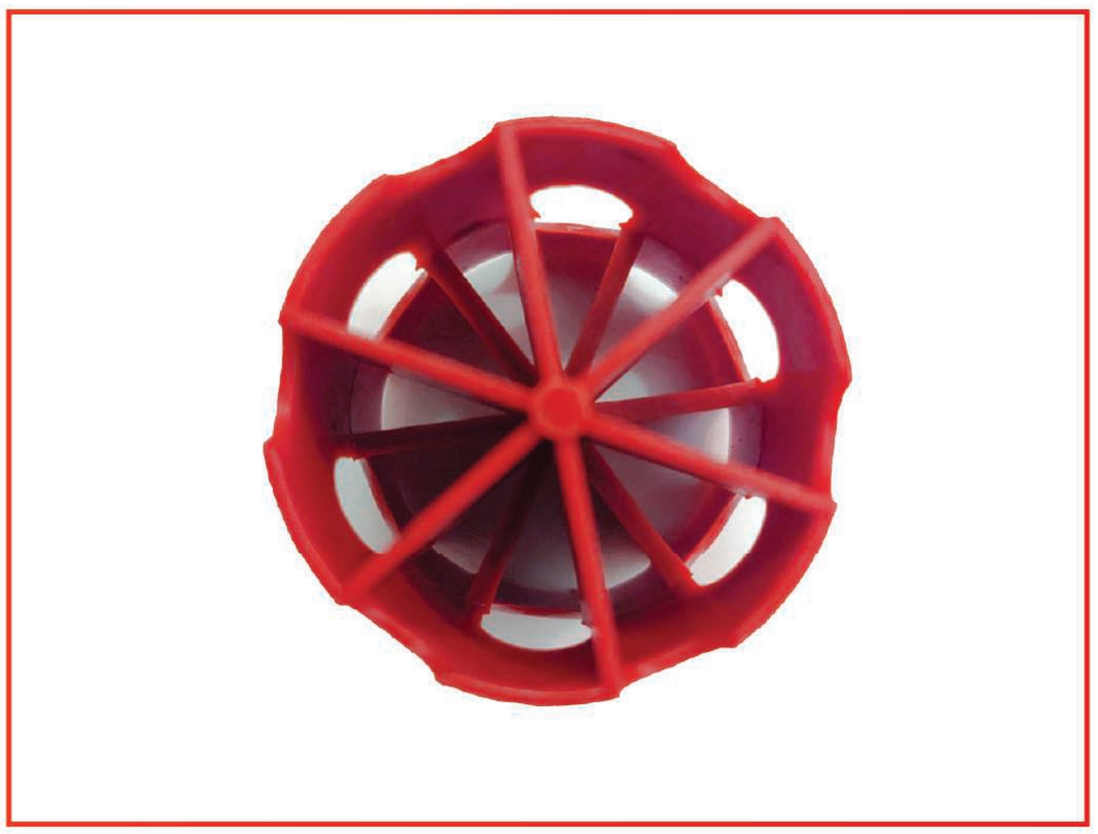
Specifications of Pall Rings with Registration Number 102039

1. Specific Surface Area: 141 square centimeters
2. Material: Polypropylene (PP) or polyethylene (PE)
3. Size and Dimensions: 35x35 millimeters (3.5 x 3.5 centimeters)
4. Quantity and Number of Pall Rings per Unit Volume: 20,500 pieces per cubic meter
5. Lifespan under the Harshest Working and Atmospheric Conditions:

(Polypropylene: 30 years, Polyethylene: 20 years)

Average specific surface area of various packing types commonly used in the industry, such as checkerboard, honeycomb, egg-carton, and Pall Rings, ranges from 85 to 96 square meters per cubic meter. In contrast, the Pall Rings manufactured by our company boast a remarkable specific surface area of 286 square meters per cubic meter. By replacing conventional packing with our Pall Rings in cooling towers, you can achieve a significant increase in performance and efficiency of over 200%.





Three crucial factors determine the effectiveness of any cooling tower:

1. Airflow rate and volume: The amount of air entering the tower's internal packing network.
2. Water flow rate and volume: The amount of hot water entering and cascading over the internal packing network.
3. Specific surface area: The contact area created between the incoming air and hot water by the internal packing walls. Our company, Transformative Industries of Eurasia, has optimized the specific surface area of our Pall Rings to the highest industry standard.

Date:November 7, 2007

Number : 67415

Islamic Republic of Iran

Iran Institute of Standards and Industrial Research

General Department of Standards and Industrial Research, Khorasan Razavi

Respected Head of the Energy Efficiency Organization of Iran

Greetings,

With respect,

We are pleased to present the following innovations and initiatives in the field of energy conservation and optimization, which have been implemented by Engineer Abolfazl Saadatmehr of this General Directorate over the past years and have yielded satisfactory results. We request your review, inspection, and registration of the following projects:

1. Replacement of high-consumption electric pumps, manifolds, large-diameter pipes, cast iron valves, and related fittings with a few small, energy-efficient pumps and smaller-diameter pipes for higher efficiency.

2. Design and construction of low-consumption burners with a capacity of 500,000 kcal/h (minimum consumption of 30 to 100 watts per hour).

3. Design and construction of ultra-low-consumption circulation pumps (20 to 60 watts per hour).

4. Equipping air handling units with a pad system (humidifier) to significantly reduce chiller operation and electricity consumption in air handling unit motors.

5. Design and construction of a type of chiller that allows the chiller to be completely removed from the circuit during the temperate months of the year (free cooling).

6. Implementation of a project to recover free warm and fresh air from boiler flue gas outlets at a minimum rate of 250,000 kcal/h and return it to the system. This involves injecting warm and fresh air into the building and creating positive pressure inside.

7. Complete elimination of electric pumps and domestic hot water coils, and design of a domestic hot water circulation circuit that operates without a pump using hydrostatic pressure. Design and installation of a wall-mounted hot water heater to supply domestic hot water for the entire building.

8. Design and internal separation of cooling towers (cooling towers) and implementation of operational measures to optimize and ultimately reduce the number of electric motors and electricity consumption from an average of 30% to 50%.

Abdullah Noori

Director General of Standards and Industrial Research, Khorasan Razavi

Mashhad - Khiyam Boulevard

General Directorate of Standards and Industrial Research of Khorasan Razavi

Winner of the Top Cooling Tower Award at the Tekap Innovation Event Patents

قوه قضائیه

سازمان ثبت اسناد و املاک کشور

گواهی نامه ثبت اختراع

۰۰۰۴۹۲ الف/۹۲

مشخصات مالک: ابوالفضل سعادت مهر، (۵۰٪) شماره ملی: ۰۷۰۲۳۷۷۴۲۲، نشانی: استان خراسان رضوی - شهرستان مشهد - بخش مرکزی - شهر مشهد-/آیت اله عبادی-خیابان شهیدعزیزی ۲-کوچه فرخنده-پلاک ۹-طبقه اول-، کد پستی: ۹۱۹۳۸۴۴۵۴۹، تابعیت جمهوری اسلامی ایران
حسین سعادت مهر، (۵۰٪) شماره ملی: ۰۶۹۰۲۸۱۴۷۱، نشانی: استان خراسان رضوی ، شهرستان مشهد ، بخش مرکزی ، شهر مشهد، /آیت اله عبادی ، خیابان شهیدعزیزی ۲ ، کوچه فرخنده ، پلاک ۹ ، طبقه اول، کد پستی: ۹۱۹۳۸۴۴۵۴۹ تابعیت جمهوری اسلامی ایران

مشخصات مخترع: ابوالفضل سعادت مهر ، شماره ملی: ۰۷۰۲۳۷۷۴۲۲، نشانی: استان خراسان رضوی - شهرستان مشهد - بخش مرکزی - شهر مشهد-/آیت اله عبادی-خیابان شهیدعزیزی ۲-کوچه فرخنده-پلاک ۹-طبقه اول-، کد پستی: ۹۱۹۳۸۴۴۵۴۹، تابعیت جمهوری اسلامی ایران
حسین سعادت مهر ، شماره ملی: ۰۶۹۰۲۸۱۴۷۱، نشانی: استان خراسان رضوی ، شهرستان مشهد ، بخش مرکزی ، شهر مشهد، /آیت اله عبادی ، خیابان شهیدعزیزی ۲ ، کوچه فرخنده ، پلاک ۹ ، طبقه اول، کد پستی: ۹۱۹۳۸۴۴۵۴۹، تابعیت جمهوری اسلامی ایران

عنوان اختراع: پالرینگ برج خنک کننده استوانه ای فشرده از طریق افزایش سطح تماس

طبقه بندی بین المللی: F28F 25/00;B21D 53/16;B01J 19/03;B01D 3/01

حق تقدم:

شماره و تاریخ اظهارنامه اصلی: **محل ثبت:**

مدت حمایت: ۲۰ سال از تاریخ	شماره و تاریخ ثبت اظهارنامه:	شماره و تاریخ ثبت اختراع:
۱۳۹۹/۰۲/۳۱ تا ۱۴۱۹/۰۲/۳۱	۱۳۹۹۵۰۱۴۰۰۰۳۰۰۹۷۶۷ - ۱۳۹۹/۰۲/۳۱	۱۰۲۰۳۹ - ۱۳۹۹/۰۵/۲۲

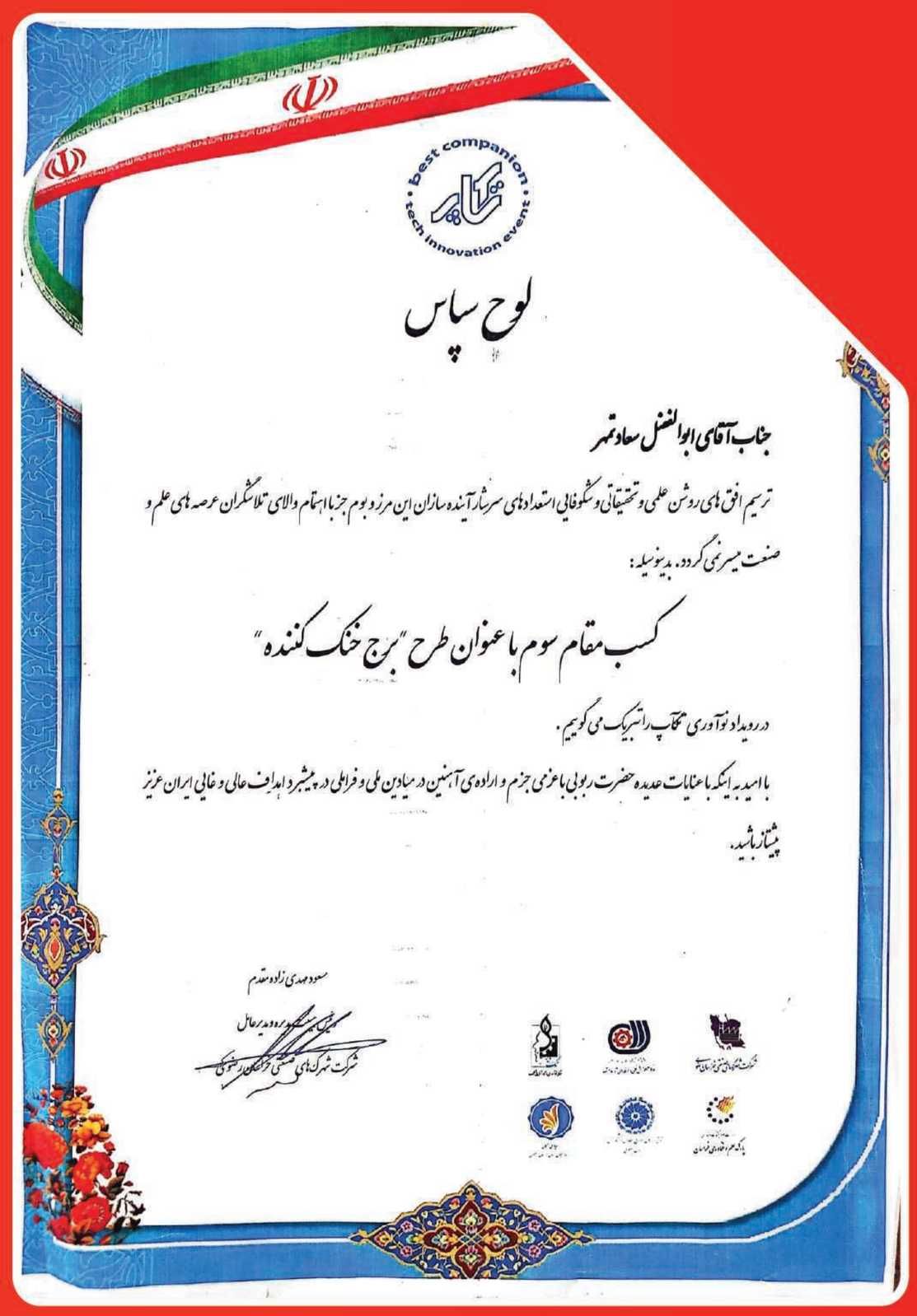
رئیس اداره ثبت اختراعات: مهرداد الیاسی — مرکز مالکیت معنوی — تاریخ: ۱۳۹۹/۰۶/۲۴ — امضاء: مهرداد الیاسی رئیس اداره ثبت اختراعات

مدت حمایت اختراع ۲۰ سال از تاریخ تسلیم اظهارنامه می باشد منوط به اینکه اقساط سالیانه اختراع در مواعد مقرر توسط متقاضی پرداخت شود

* نام گواهی نامه: توصیف ادعا ، خلاصه توصیف و نقشه

** درصورت تعدد مخترعین، مالکین و یا تغییرات مراتب بشرح مندرج در ظهر گواهی نامه می باشد.

۵۵۰۰ ریال



قوه قضائیه

سازمان ثبت اسناد و املاک کشور

گواهی نامه ثبت اختراع

۰۰۲۱۲۴ الف/۹۲

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مشخصات مالک: ابوالفضل سعادت مهر، (۵۰٪) شماره ملی: ۰۷۰۲۳۷۷۴۲۲، نشانی: استان خراسان رضوی - شهرستان مشهد - بخش مرکزی - شهر مشهد-/آیت اله عبادی-خیابان شهیدعزیزی ۲-کوچه فرخنده-پلاک ۹-طبقه اول-، کد پستی: ۹۱۹۳۸۴۴۵۴۹، تابعیت جمهوری اسلامی ایران
یاسمن سعادت مهر، (۵۰٪) شماره ملی: ۰۹۲۴۱۷۳۱۳۰، نشانی: استان خراسان رضوی ، شهرستان مشهد ، بخش مرکزی ، شهر مشهد، محله آیت الله عبادی ، خیابان شهیدعزیزی ۲ ، کوچه فرخنده ، پلاک ۹ ، طبقه اول، کد پستی: ۹۱۹۳۸۴۴۵۴۹، تابعیت جمهوری اسلامی ایران

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عنوان اختراع: برج خنک کننده (کمپکت) استوانه ای فشار مثبت با سیستم دهش پنج بعدی از فضای داخلی پارلینگ ها

طبقه بندی بین المللی: F28C 1/02

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رئیس اداره ثبت اختراعات: مهرداد الیاسی — اداره کل مالکیت صنعتی — مرکز مالکیت معنوی — تاریخ: ۱۳۹۹/۱۰/۰۳ — امضاء: مهرداد الیاسی رئیس اداره ثبت اختراعات

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۵۵۰۰ ریال

best companion · tech innovation event

لوح سپاس

جناب آقای ابوالفضل سعادتمهر

ترسیم افق های روشن علمی و تحقیقاتی و شکوفایی استعدادهای سرشار آینده سازان این مرز و بوم جز با استمام والای تلاشگران عرصه های علم و صنعت میسر نمی گردد. بدینوسیله:

کسب مقام سوم با عنوان طرح "برج خنک کننده"

در رویداد نوآوری تکاپ را تبریک می گوییم.

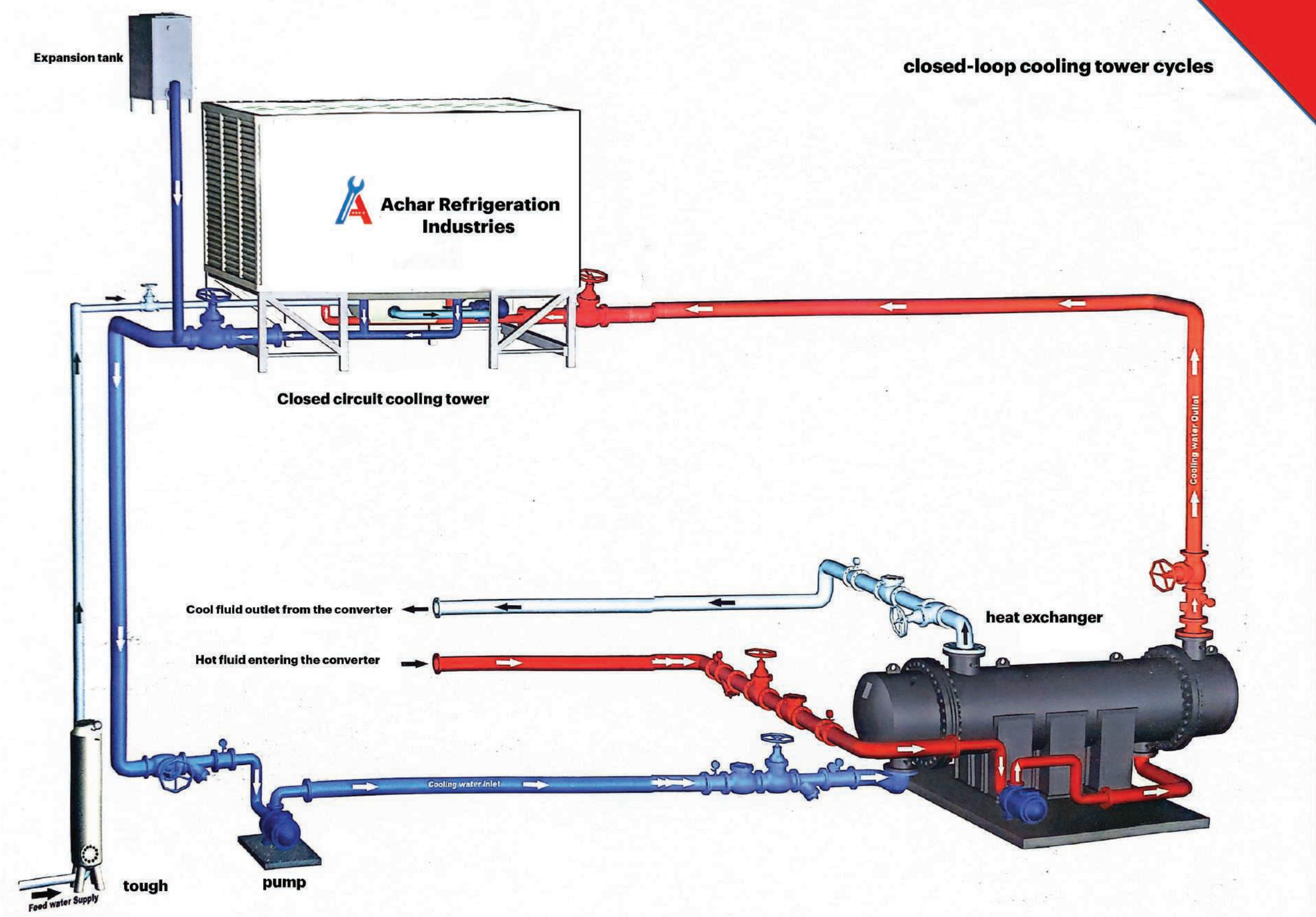
با امید به اینکه با عنایات خدیده حضرت ربوبی با عزمی جزم و اراده ی آهنین در میادین ملی و فرامللی در پیشبرد اهداف عالی و غایی ایران عزیز پیشتاز باشید.

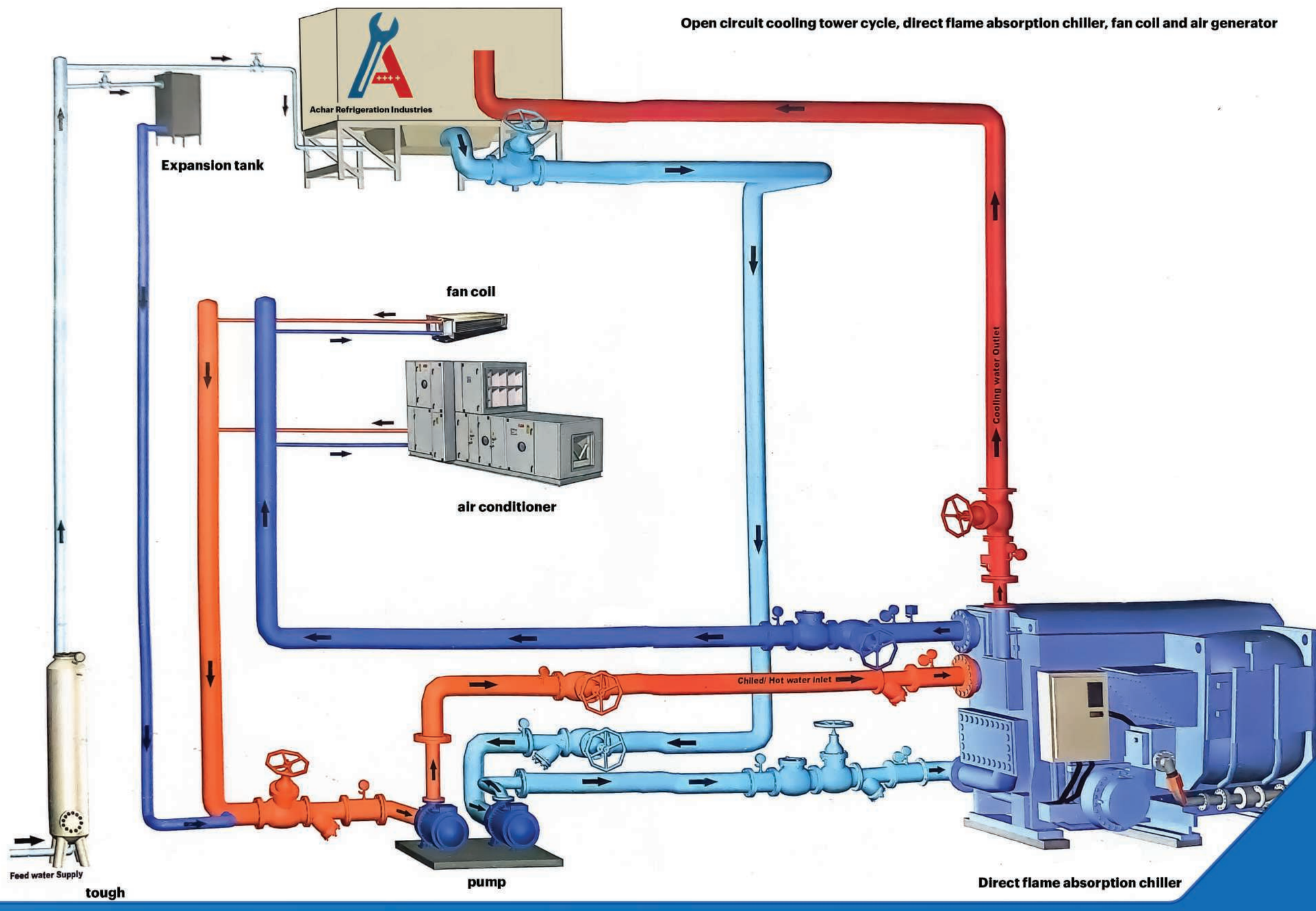
سعود مهدی زاده متقدم

مدیر عامل و رئیس هیئت مدیره

شرکت شهرک های صنعتی خراسان رضوی

closed-loop cooling tower cycles





open-loop cooling tower cycles

One of the main problems of the old and obsolete generation of towers in the world of industry, which we tried to solve

❌ Excessive Water Loss:

Open-loop cooling towers: Up to 60% water loss due to excessive droplet escape

Hybrid Quilly cooling towers: Up to 66% water loss

Adiabatic cooling towers: Up to 82% water loss

☑ Our Solution: We've significantly reduced water loss by up to 82% compared to traditional towers.

❌ Excessive Energy Consumption:

Traditional cooling towers: High energy consumption due to inefficient electric motors

☑ Our Solution: Smart inverter-controlled electric panels specifically designed for our cooling towers, reducing energy consumption by up to 40%

❌ Excessive Space Requirements:

Traditional cooling towers: Bulky and space-consuming designs

☑ Our Solution: Up to a 10x reduction in occupied floor area and a 20x reduction in volume compared to traditional towers

❌ High Wear and Tear:

Traditional cooling towers: Rotating water distribution components, bearings, seals, and PVC pipes are prone to wear and tear due to constant water exposure

☑ Our Solution: Elimination of all mechanical and moving parts significantly reduces wear and tear, extending the lifespan of our cooling towers and minimizing downtime.

❌ Excessive Noise and Vibration:

Traditional cooling towers: Loud operation due to heavy and worn-out components

☑ Our Solution: We've reduced noise levels to a comfortable 135 dB.

❌ Aesthetics and Maintenance:

Traditional cooling towers: Unsightly buildup of gypsum, efflorescence, and icicles on the outer walls due to splashing and secretions

☑ Our Solution: Our towers maintain a clean and attractive appearance, minimizing maintenance requirements.

❌ Low Efficiency and High Volume:

Traditional cooling towers: Low efficiency and high volume, requiring multiple units for industrial applications

☑ Our Solution: Our towers achieve maximum efficiency, allowing a single unit to replace multiple traditional towers, saving water, electricity, space, and costs.

❌ Fiberglass Tower Drawbacks:

Traditional fiberglass towers: Short lifespan, non-recyclable, and carcinogenic due to thin, fragile, and impact-prone construction using 300 gsm glass wool

☑ Our Solution: Our towers utilize a unique blend of polyethylene and stainless steel, resulting in a lifespan of over 30 years and minimal downtime.

Unique Features of Our Cooling Towers

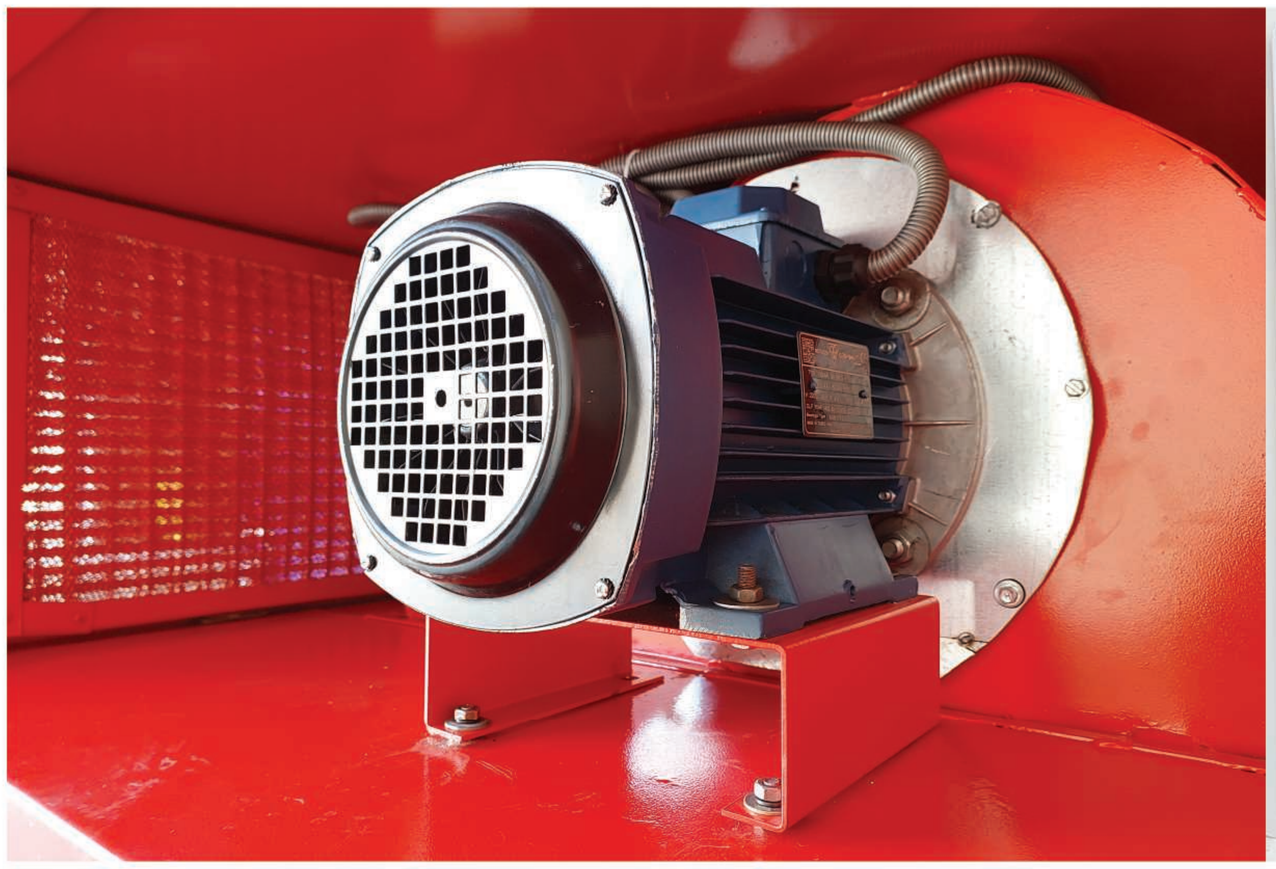
- Effortless Cleaning: Our towers allow for convenient acid washing of the packing, internal components, and coils directly on the unit in just 2 hours.

- Uniform Air Distribution: We employ multiple motors and centrifugal fans (up to 10 in a 500-ton tower) to ensure uniform and continuous air pressure and flow throughout the tower and across the dense packing network.

- Equitable Water Flow: Our multiple water sprayers and distribution umbrellas ensure even and continuous distribution of hot water across the entire packing network.

- Multi-Layer Air Filtration: All our models feature multi-layer air filters that extend the lifespan of internal components, increase efficiency, and significantly reduce gypsum and mineral deposits on packing, coils, condensers, and heat exchangers.

- Comprehensive Guard System: A comprehensive guard system protects the filtration network, ensuring even and balanced distribution of dust-free suction air below the tower inlet. This system also prevents snow, water, and rain from entering the suction and filter sections, enhancing aesthetics, durability, and preventing physical damage to the filter network.



Introducing the Revolutionary Cooling Towers from Eurasia's HVAC Industry Leaders

- With pride, we present the next generation of cooling towers, engineered with the latest technology and backed by 5 international patents.

- Reduced Water Consumption: Our advanced drip network, filtration system, super-cooling packing, and optimized water and airflow distribution minimize water usage. Only one cooling hose is required for all tower models.

- Lower Energy Costs: Smart inverter-controlled electric panels reduce energy consumption by up to 40%.

- Compact Design: Our towers occupy up to 10x less floor space and 20x less volume compared to traditional designs, eliminating dead space and utilizing high-surface-area packing.

- Extended Lifespan: Premium materials ensure a lifespan of up to 30 years.

- Superior Efficiency: Our unique design achieves maximum efficiency, allowing a single tower to replace multiple outdated units.

- Comprehensive Warranty: Enjoy 12 months of warranty

Call us today to discuss your cooling tower needs and receive a complimentary consultation.

+989154002108

+989155191890

Saadatmehr Kalandarzehi Pour

CERTIFIED

international patent certificate

0098 5132454513-15

www.borodatiachar.com

tahavolafarinansanat@gmail.com

Iran - Mashhad Industrial Town

Three kooshesh Southern - No. 118

Saadatmehr

Kalandarzehi Pour