

# CLIMATE CONTROL RENTAL SOLUTIONS

*Your HVAC specialists*



[byrnerental.com](http://byrnerental.com)

# BYRNE

## Equipment Rental

30+ YEARS | 16,000+ ASSETS | MARKET LEADER

For over 30 years, Byrne Group has led the Middle East's equipment rental industry.

Headquartered in Dubai, Byrne delivers turnkey rental and infrastructure solutions across the UAE, Saudi Arabia, Oman, and Bahrain, supported by a fleet of 16,000+ assets spanning modular buildings, power, climate control, hoist & access, sanitation, mobile lighting, and hybrid solar systems.

Beyond equipment, we're a one-stop solutions partner committed to reliability, innovation, and sustainability — investing in digital transformation, and green power alongside our regional expansion.



# Equipment Range

Byrne's product range is built upon our successful 'single source solution' model approach, satisfying all equipment rental requirements across multiple industries. Our rental fleet is constantly updated to carry the latest brands of equipment and technology, **enabling operational efficiency through equipment rental and lease solutions.**

Clients can expect a consistent level of safety awareness throughout the Middle East and the industry sectors that we operate in.



*We provide the widest range of industrial equipment in the rental market - including rental and long term leasing solutions outside our current fleet.*

# Single Source Solution

Working with Byrne Equipment Rental means working with a company that integrates project management, application engineering, equipment selection and service knowledge in a unique way.

As a result, you can rely on appropriate evaluation, setup, commissioning, installation, integration of controls and continuous maintenance to consistently satisfy your needs on schedule.

Avoid taking a chance on delays, incorrect equipment setup, or misunderstandings when working with a third party when you require interim cooling.

Our climate control division specialises in three main areas; **spot cooling**, **comfort cooling** and **process cooling** and contains a wide range of equipment including split & package air conditioning units, chillers, air-handlers, cooling towers, dehumidifiers, heaters & ventilation equipment.

The range includes additional offerings including;



Site Survey & HVAC design



Delivery, installation & commissioning



Service, maintenance & health checks



Synchronized solutions

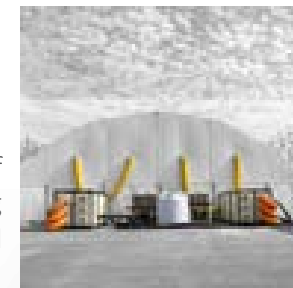


Power & distribution products

Byrne sets itself apart as a specialized rental company, adept at customizing equipment to exact specifications to provide tailored solutions. Leveraging Byrne's expertise in custom modifications can enhance your company's operations significantly.

## Air Handling Unit

An air handling unit coupled with air cooled chillers can handle large volume of treated air inside a building or event through internal duct work.



## Process Cooling

For applications needing consistent cooling at low temperatures, single and multi-compressor screw chillers with Variable Speed Drive are offered.



## Cooling Towers

Byrne cooling towers can provide cooling water reaching near to the WBT of the ambient air. Ideal for industrial and commercial usage.



## Air-cooled Chillers

Byrne's industrial air -cooled chillers are rugged and designed to cater a wide range of output temperatures, from negative to positive supply water temperatures.



## Plate Heat Exchanger

An important part of our IPWC system, our plate heat exchangers are SS and titanium made, which makes them ideal to be used for any quality of process water available.



## Events Cooling

Our event compatible packaged air conditioning systems pull hot air from the tent and push cool air into the tent area, making it cooler for the audience.



## Roof Top Package Units

Totally fresh air (TFA) large industrial gauge package units designed to operate in challenging environmental conditions.



## Floor Standing Units

Aesthetically pleasing for events and spaces with floor-mounted air conditioning systems.



## Mud Cooling

Our chillers with specially built PHE are perfect for mud chilling applications. BYRNE's mud cooling system can be used to cool hot, muddy water.



## Wild Air Cooling

Byrne package air conditioning units and air handling units are ideal for wild air cooling application during construction and building finishing and fit-out stage.



# Single Source Solution

## Sales & Technical Advice

For clients facing uncertainty regarding their specific technical needs, our skilled technical team is ready to offer consultations. Their extensive understanding of our product range, acquired through years of experience, equips them to deliver tailored technical solutions effectively. With expertise in accommodating client budgets, we provide cost-effective recommendations and viable alternatives.

## Fast Response

We prioritize the prompt delivery of services to fulfill your needs, acknowledging the vital importance of your business operations. Positioned strategically across the GCC, our comprehensive rental fleet guarantees rapid deployment and installation. Supported by sales and service facilities strategically positioned throughout the area, we are prepared to deliver solutions promptly and effectively, wherever and whenever they are needed.

## Direct Process Water Cooling (DPWC)

Byrne's Direct Process Water Cooling (DPWC) system is designed to provide efficient, reliable cooling for process water, ensuring optimal performance in challenging conditions. Our advanced technology helps achieve consistent cooling, reduce downtime and boost productivity.

The setup cools hot process water (40°C) to a desired level before returning it to the process line. The system uses a mixing valve station, which circulates the hot water through a closed-loop circuit with chilled water pumps. The water is cooled to 12°C by air-cooled chillers and sent back for use. The system is powered by a fully enclosed generator and fuel tank, with equipment positioned for easy maintenance and refueling.

## Indirect Process Water Cooling (IPWC)

Byrne's Indirect Process Water Cooling (IPWC) system is designed to provide efficient, reliable cooling for process water, ensuring peak performance even in extreme conditions. This system cools hot process water without mixing it with the chilled water circuit.

The setup features high-efficiency Plate Heat Exchangers (PHE), which can handle fluids as hot as 60°C and reduce their temperature to 45°C at predefined flow rates. The chilled water, circulated at optimal chiller temperatures, absorbs heat from the hot fluid. Chilled water pumps send the cooling water to an air-cooled chiller before returning it to the PHE, in a continuous cycle with makeup water attached to compensate for any loss.

## Direct Process Water Cooling (DPWC)



## Indirect Process Water Cooling (IPWC)



# Emergency Cooling Requirement

For any emergency cooling needs you may encounter, Byrne is equipped to address them promptly, whether it involves chiller maintenance, malfunctions, or the need for supplementary cooling.

## Emergency Cooling

To ensure continuity in operations in the event of a cooling system failure, it is imperative to engage a reliable supplier who can guarantee the necessary supplies and services. Drawing upon our extensive expertise in critical cooling systems, Byrne offers solutions that minimize downtime and eliminate uncertainties.

## Regular Maintenance

When a chiller undergoes routine maintenance and is temporarily offline, a Byrne rental chiller offers added reassurance by continuing to operate during the repair process. This ensures that maintenance is conducted meticulously without the pressure of an immediate need to reinstate the unit.

## Replacing Cooling Systems

A Byrne rental chiller facilitates continuous operations during equipment replacement, allowing for the seamless ordering and installation of new equipment. Moreover, renting equipment of the same capacity ensures that you acquire precisely what is required before committing to the purchase of a new chiller.



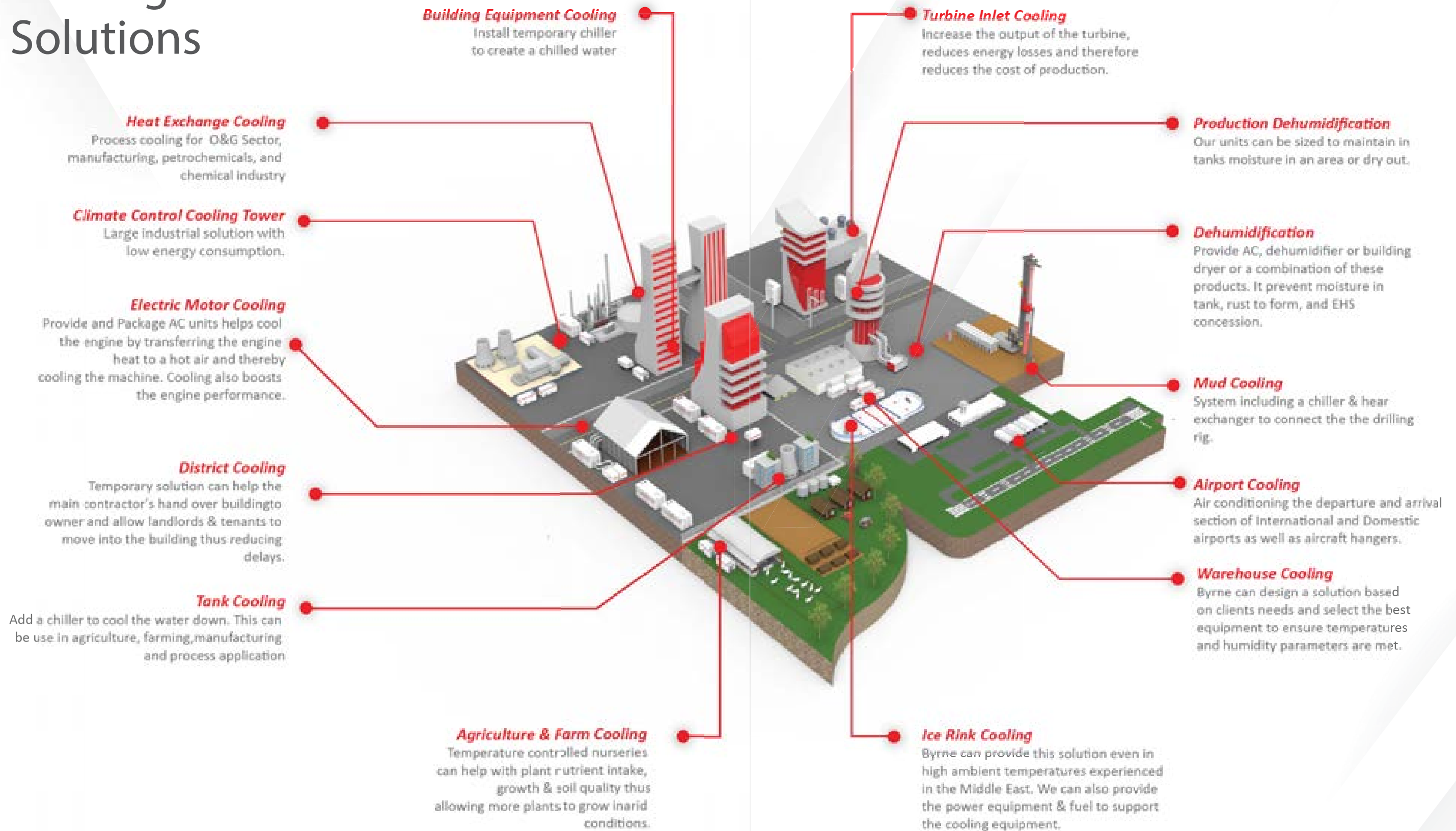
## Additional Cooling Capability

For short-term cooling requirements, such as managing seasonal heat waves or accommodating peak business periods, opting for a Byrne rental chiller presents a cost-effective solution for additional cooling capacity. Renting a chiller can prove more economical than purchasing equipment that is only utilized periodically throughout the year. To explore further advantages of incorporating a rental chiller into your business operations, consider seeking guidance from Byrne.



# BYRNE

## Cooling Solutions



# Equipment Range

## AC Floor Standing Split Units

- 5 TR Floor Standing Split Units
- 7 TR Floor Standing Split Units
- 10 TR Floor Standing Split Units

## Package Air Conditioning Units

- 10 TR Package Air Conditioning Units (PACU)
- 15 TR PACU
- 20 TR PACU
- 30 TR Industrial PACU
- 50 TR PACU
- 50 TR Industrial PACU

## Chiller With Pumps

- 150 TR Chillers with Pumps
- 200 TR Chillers with Pumps
- 300 TR Chillers with Pumps
- 500 TR Chillers with Pumps
- 200 TR Air Handling Units
- 500 TR Plate Heat Exchangers
- 1,000 TR Plate Heat Exchangers

Byrne Equipment Rental specializes in the following range of products:

- Air Conditioning Equipment
- Evaporative Cooling Equipment
- Wild Air Cooling
- Air Handling System
- Cooling Towers 1000 TR
- Pumps
- Plate Heat Exchangers



# Case Studies



## District Cooling Application

Byrne Equipment Rental provided a bespoke temporary district cooling plant for a client requiring extensive cooling support for their operations.

The solution involved supplying 2500TR chillers and 9MV generators to meet the client's specific requirements.

Byrne's tailored approach addressed the scale of cooling needed, providing not just the chillers but also power generation equipment to ensure seamless operation. The solution provided relief from harsh summer temperatures for hundreds of people in schools, residential apartments, villas and commercial locations within various office blocks powered by the cooling plant.

This demonstrated Byrne's ability to deliver comprehensive and effective cooling solutions for diverse environments.

## Precision Cooling Application

Byrne Equipment Rental supported a client's service on gas turbines inside their power plant, which included maintenance, repairs and commissioning. The solution involved supplying 2000 TR of cooling capacity and 16MV generators to regulate the plant's temperature and power requirements during the service.

To meet the client's needs, Byrne installed an automated system with sensors as per their specifications. This ensured that the service could be carried out smoothly without any disruption, even during shutdown and turnaround periods when the sea water cooling system was unavailable.

Byrne's temporary cooling solution effectively maintained the plant's operations, showcasing their ability to provide reliable support for critical services in challenging environments.



# Case Studies



## Process Cooling Tower Water

Our key client required equipment to support their Turnaround & Inspection (T&I) activity, ensuring the continued efficiency and safety of their operations.

Byrne Equipment Rental supplied an air-cooled screw chiller powered by a variable speed drive, capable of providing 1,600 Tons of refrigeration. This system included high-efficiency exchangers and hydronic systems to maintain unusual temperatures on the hot side, all powered by a cutting-edge 4.4 MW diesel-fired generator. The equipment was specifically chosen to meet the unique requirements of Saudi Aramco's T&I activities.

The project involved careful planning and collaboration from the design stage through to implementation, involving detailed discussions and meetings with the end user to determine optimal unit placement and piping routing. The project was successfully delivered, meeting the client's expectations and allowing them to complete their T&I activity without disrupting their plant operations.

## Indirect Process Water Cooling

Byrne Equipment Rental addressed a crucial need for a prominent refinery located in Yanbu Industrial City. This full-conversion refinery processes 400,000 barrels per day of Arabian heavy crude oil to produce high-quality fuels and refined products for both domestic and international markets.

The refinery encountered problems with outdated chillers, specifically damaged condensers resulting from their age. To address these issues, Byrne Equipment Rental proposed a re-engineered solution that tackled high sulfur levels affecting copper tubes in the coolers. The proposed solution included high-efficiency heat exchangers, advanced hydronic systems, and new chillers to ensure optimal temperature regulation.

Despite the complexities involved in installing the system during the Eid holidays, the solution was delivered and installed on schedule. This timely implementation met the refinery's temperature requirements and ensured a high level of client satisfaction.



# Case Studies



## Cooling Sports Event

For many years Byrne Equipment Rental has provided key equipment for The Dubai Sevens, the longest-running sports event in the Middle East.

Equipment includes, temporary buildings for merchandise cabins and ticket booths, sanitation solutions, air conditioning units and material hoists for efficient event setup.

In addition to equipment rental, Byrne has managed critical aspects of the event's infrastructure. This includes setting up operational cabins, installing hoist and access Operational cabins, installing hoists and mast climbers equipment, and placing sponsorship signage on and off the pitch. Byrne's comprehensive involvement has been instrumental in ensuring the smooth execution of the event, contributing to its ongoing success and growth as a premier sporting occasion in the region.

## Electrical Substation Cooling

Our client required temperature control of 28°C or less at a Power Plant for commissioning LV panels, substations, transformer rooms, and a server room.

Byrne Equipment Rental supplied a range of air conditioning units, including 25 x 5TR splits, 20 x 10TR splits, 5 x 7.5TR packages, 8 x 15TR packages, and 8 x 25TR packages, along with generators (250kVA, 350kVA, 500kVA) to meet the cooling needs.

Byrne provided a full turnkey solution, covering heat load calculation, design, cooling solutions and on-site support. This temporary cooling solution effectively regulated and monitored the temperature, meeting the client's precise requirements.



# Case Studies



## Cooling Riyadh Season

For the Riyadh Car Show, part of Riyadh Season, Byrne Equipment Rental was tasked with providing wild air and comfort cooling across 10,000 sqm of tented structures.

The solution involved supplying 11 AHUs (200 Ton) and 8 chillers (230 Ton) to meet the cooling demands. Byrne provided 1,600 Ton of chilled water and 2,200 Ton of air, which was distributed through internal ducting at ceiling level, maintaining an ambient temperature of 20°C.

This setup ensured a consistently cooled environment, not only enhancing customer comfort but also protecting the high-value cars on display by maintaining a stable temperature throughout the event.

## Chilling Milk at Dairy Industry

Our client is one of the region's largest dairy producers and a pioneer in high-tech, sustainable 'model farm' operations. They faced a challenge with their chillers, essential for maintaining the low temperatures needed for milk cooling. The equipment struggled to maintain the desired 1°C, especially during peak summer, risking their operations.

We addressed this by supplying cutting-edge, air-cooled chillers designed for low temperatures. The chillers were tailored to maintain 1°C using a mixture of 25% water and ethylene glycol. By fine-tuning the suction and discharge settings, the chillers matched the temperature of their Ammonia chillers, even in high ambient temperatures.

Meeting our client's requirements, ensured an uninterrupted milk cooling during the critical summer months, also reinforced their operations and ensured the continued quality of their dairy products.



# Case Studies



## Cooling Water for Cement Batching Plant

One of our key clients is a leading supplier of precast concrete and fiberglass plastic products in the Kingdom of Saudi Arabia, with a strong presence across the GCC. Renowned for quality products and customer satisfaction, they have earned recognition and approval from various government organizations for its concrete supplies.

Facing issues with their existing chillers at one of their facilities, which affected productivity. To address this, Byrne proposed a temporary cooling solution and strategic connection points to keep production running smoothly. After a thorough site walkthrough and evaluation, Byrne provided a customized solution, which the client found satisfactory and agreeable.

During the peak summer, the chillers were delivered and commissioned in record time, supplying cooled water for cement mixing, ensuring the desired product quality. This allowed our client to maintain their existing chillers and enhance overall output.

## Chillers to Condense Ammonia

Our client, a global manufacturing company operating across multiple sectors, encountered performance challenges with their existing rental chiller supplier during a critical Turn Around task. Seeking a reliable solution, they turned to Byrne. Byrne provided a state-of-the-art 800TR air-cooled chiller with a screw compressor, along with essential supporting equipment, including pumping systems, generators, piping, and electrical work. This setup ensured uninterrupted 24/7 operation.

Byrne conducted detailed calculations to assess the cooling requirements and designed a comprehensive solution that addressed our clients' specific needs. The client appreciated the strategic approach and approved the replacement of their existing system. Byrne's solution not only improved efficiency but also ensured the affiliate could complete their task reliably and on schedule. Through a tailored, high-performance cooling system, Byrne delivered the operational consistency and performance they required for their Turn Around project.



# Case Studies



## Cooling Lube Oil Cooler Solution

Our client, a global leader in chemicals, faced overheating in its lube cooler, threatening air compressor failure and a potential plant shutdown.

Reaching out to Byrne Equipment Rental over a weekend, they needed an urgent solution. Byrne swiftly assessed the situation and presented two options, ultimately implementing the most suitable one within a day.

The team delivered and installed air-cooled screw chillers, pumps, generators, buffer tanks and fuel tanks, effectively cooling the system. This prompt action prevented costly downtime and ensured the plant's uninterrupted operations. Our client praised Byrne's responsiveness and expertise in resolving the issue, maintaining smooth production.

## Package Units for Spot Cooling

Our client, the world's second-largest oil corporation, faced significant cooling challenges within its refinery due to extreme temperatures reaching 46°C.

To address this, Byrne Equipment Rental provided Total Fresh Air (TFA) Package Air Conditioning units, designed to operate efficiently in such harsh conditions and deliver cool air at 18°C. These units included a generator, fuel tank, and flexible ducts for optimal air distribution.

After a thorough assessment of our client's needs, Byrne's solution effectively addressed the cooling issues, ensuring a comfortable environment crucial for operations throughout the summer. The successful implementation of these air conditioning units demonstrated Byrne's capability to deliver tailored solutions to meet demanding industrial requirements.



# Industries & Clients - HVAC Division



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|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <br>Vendor Number 10042849      | <br>Vendor Number 505326    | <br>Vendor Number 7599       | <br>Vendor Number 63345      | <br>Vendor Number 10737    |
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*Enabling operational efficiency through equipment rental and lease solutions*

UAE ■ KSA ■ Bahrain ■ Oman