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ALKANAR

شركة الكنار العربية المحدودة
Arabian Al Kanar Co. LTD.

WWW.ALKANAR.COM/INDUSTRIAL

DIVISION PROFILE

Industrial Services.

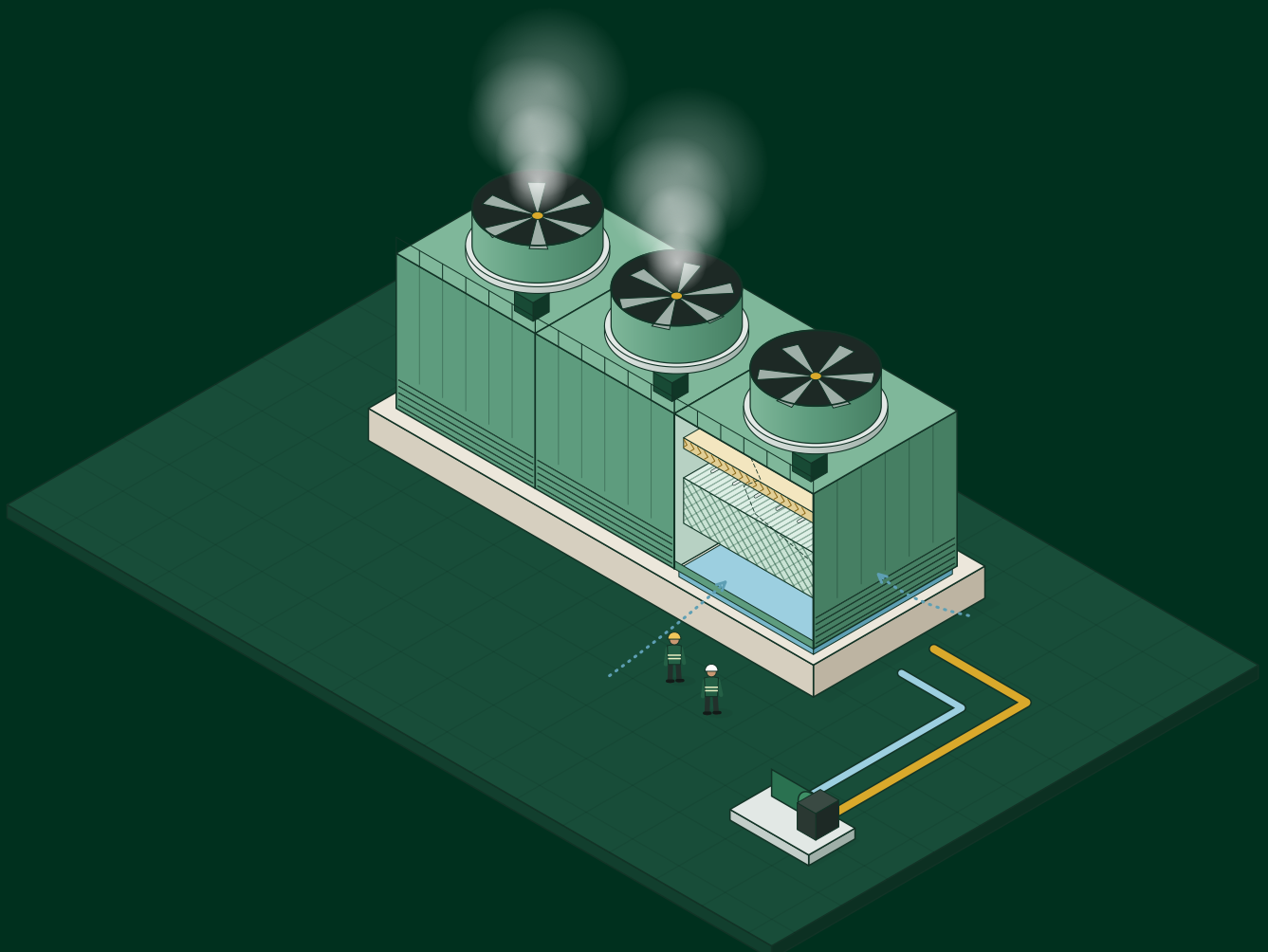
Field-erected cooling tower engineering and services

Inspection, maintenance, emergency repairs, rehabilitation and reconstruction for oil and gas, energy, major infrastructure and institutional campuses.

Since 2011
cooling tower specialists

In-house
engineering and site teams

ISO
9001 · 14001 · 45001



BY THE NUMBERS

Engineering you can measure.

Engineering, site execution and lifecycle maintenance for field-erected cooling towers — at gas plants, petrochemical complexes, power plants and large campuses, by our own engineers and technicians.

15
years of cooling tower work in Saudi Arabia and Bahrain

+42%
capacity gained from an existing tower

+25%
capacity in the same footprint

Zero
unit shutdowns during a tower replacement

100%
Saudi-owned, headquartered in Al-Khobar

23 m
basin height of our featured tower replacement

ONE TEAM ACROSS THE TOWER LIFECYCLE

01 Inspect — 02 Engineer — 03 Rebuild — 04 Maintain — 05 Respond

9 SERVICE LINES

- Inspection & condition assessment
- Thermal performance testing & engineering
- Shutdown & turnaround maintenance
- Emergency repairs & breakdown support
- Mechanical repair & reliability
- Structural rehabilitation
- Tower reconstruction & performance upgrades
- Planned & long-term maintenance contracts
- Erection & supervision

Capacity results are outcomes of individual tower upgrades.

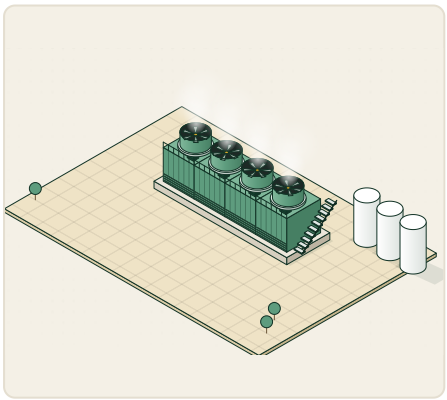
WHO WE ARE

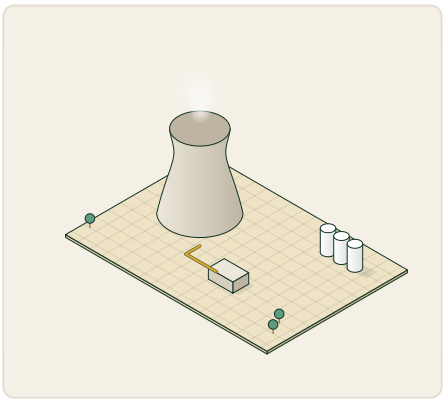
Engineering and lifecycle support for field-erected cooling towers.

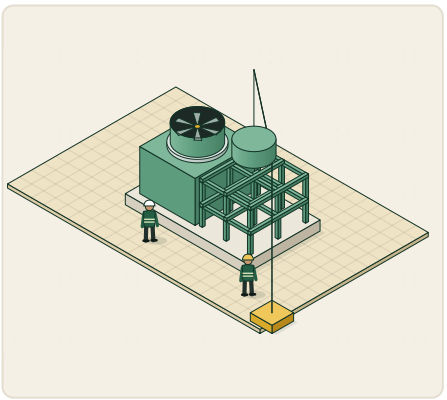
Al Kanar Industrial Services is the industrial division of Arabian Al Kanar Co. Ltd., a 100% Saudi-owned company headquartered in Al-Khobar. Since 2011 we have served oil and gas, petrochemical, power and utility operators and large institutional campuses. Our engineers define the work, our own crews execute it on site, and the same team stays on to maintain the tower.

OWNERSHIP	100% Saudi-owned
HEAD OFFICE	Al-Olaya, Al-Khobar
LONG-TERM CONTRACT	Long-term maintenance contract holder for a regional petrochemical giant
VENDOR REGISTRATION	Saudi Aramco · Vendor ID 10040465
REQUIREMENTS	Experienced with the specifications of the Kingdom's major energy, power and water operators
CERTIFICATION	ISO 9001 · 14001 · 45001 — certified scope includes cooling systems

Oil & gas	Petrochemicals & chemicals	Power & water
Universities	Healthcare	Commercial & public







In-house, end to end

In-house engineering and site teams, with clear responsibility from planning through maintenance.

OEM-aligned

Work carried out to the tower manufacturer's specifications.

Zero injuries since 2011

No injuries since 2011 across our own staff and subcontractors — work planned to operator permit-to-work requirements under an ISO 45001-certified system.

WHAT WE DO

Every service a cooling tower needs.

From a single inspection to a multi-year maintenance partnership.

Emergency repairs, rehabilitation and component replacement across multiple cooling tower makes and models.

EQUIPMENT COVERED

Cooling towers · Plate heat exchangers · Pumps · Accessories · Wet surface air coolers · Side-stream and self-cleaning filtration

Inspection & condition assessment

A clear picture of every tower before money is spent.

- Internal tower inspection
- Mechanical inspection — fans, gearboxes, drive shafts

Thermal performance testing & engineering

Measured performance, and upgrades engineered to a target.

- Performance testing to CTI ATC-105
- Thermal design and upgrade calculations

Shutdown & turnaround maintenance

Planned work completed inside your shutdown window.

- Fill and drift eliminator replacement
- Spray nozzle inspection and replacement

Emergency repairs & breakdown support

Repairs when a tower, fan or drive fails in service.

- 24/7 emergency line and site mobilisation
- Fan blade, gearbox and drive repairs, with parts from stock

Mechanical repair & reliability

Fans, gearboxes and drives kept true, balanced and quiet.

- Laser shaft alignment
- Vibration analysis

Structural rehabilitation

Restoring the structure that carries the tower.

- Timber replaced with FRP structural shapes
- FRP repairs and epoxy coating of steel

Tower reconstruction & performance upgrades

More cooling from an existing tower and footprint.

- Complete tower reconstruction
- Fill, distribution and fan upgrades

Planned & long-term maintenance contracts

Annual and multi-year maintenance for operating plants.

- Monthly, quarterly or annual visits
- Planned and breakdown maintenance

Erection & supervision

New towers and component packages installed to specification.

- Complete tower erection
- Erection supervision

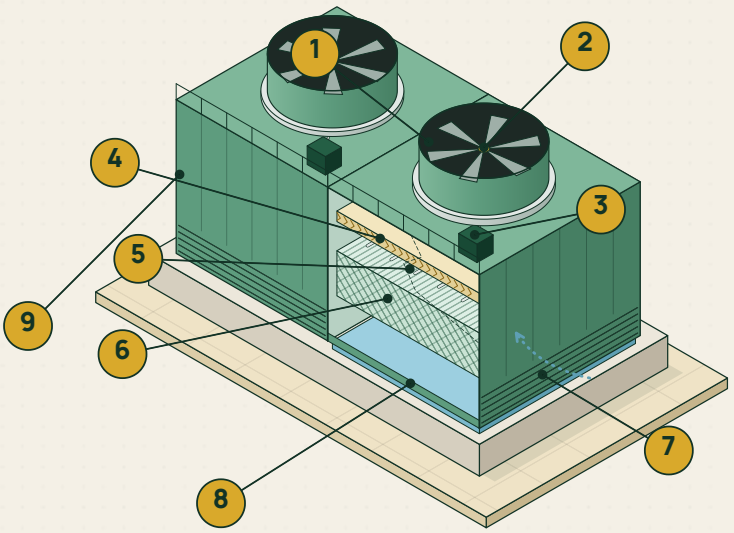
SUPPORTING CAPABILITIES Temporary cooling · Rental towers · Spares · Equipment supply

INSIDE A COOLING TOWER

Every component, one accountable team.

Air is drawn up through falling water; a small part of the water evaporates, cooling the rest. Each component affects the others — so we engineer changes for the whole tower, not part by part.

1 **Fan & fan stack** Fan repair & pitch setting	2 **Gearbox & drive shaft** Alignment & gearbox overhaul	3 **Motor** Motor alignment & overhaul
4 **Drift eliminators** Drift eliminator replacement	5 **Water distribution & nozzles** Distribution & nozzle repair	6 **Fill media** Fill cleaning, replacement, upgrade
7 **Air inlet louvres** Louvre & casing repair	8 **Cold-water basin** Basin cleaning & repair	9 **Structure & casing** Structural & FRP repair



Illustrative induced-draft counterflow arrangement. Component layouts vary with tower design.

WHAT A TOWER TELLS YOU

Cold-water temperature too high
Performance test, fill cleaning or replacement, nozzle repair, fan blade angle setting

Vibration or noise from the fan
Laser alignment, vibration analysis, gearbox overhaul, blade repair and pitch setting

Drift and water loss
Drift eliminator replacement (0.0005% of circulating flow), distribution repair

TURNAROUND & CONTRACTS

Planned work, inside your shutdown window.

Turnaround work follows one clear sequence, with a written report after inspection and completion records at handover.

Long-term maintenance contract holder for a regional petrochemical giant
The same team, procedures and spares serve every customer — from one inspection to multi-year contracts.

TURNAROUND SERVICES

01 Inspect
Inspect the tower and its mechanical equipment.

02 Report
Identify problems and recommend the right fix.

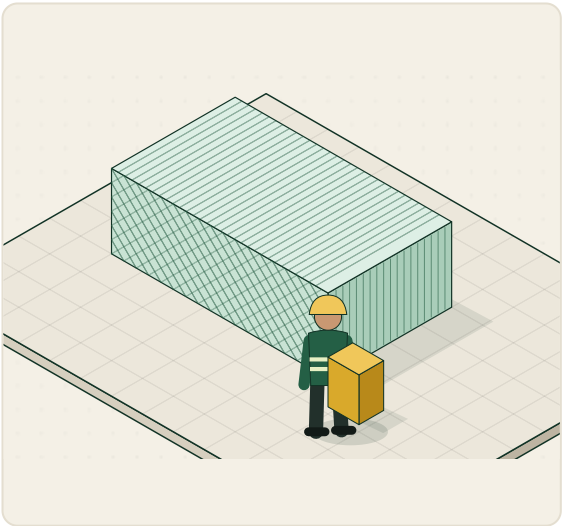
03 Supply
Supply spare parts from stock.

04 Repair
Repair, service or reconstruct the tower.

05 Verify & hand over
Agreed inspections, functional checks or thermal testing, then completion records and recommendations.

ANNUAL MAINTENANCE CONTRACTS

- Monthly, quarterly or annual visits
- Internal and mechanical inspections
- Water analysis
- Recommendations after every visit
- Parts supply and breakdown service
- 24/7 emergency line, technical support and site mobilisation



Documented tower histories
Maintenance teams supported by tower histories, inspection findings and previous repair records.

Parts ready before they are needed
Wear parts held in our own warehouse and matched to your towers.

One team, start to finish
The same engineers inspect, repair and maintain your towers.

RECONSTRUCTION & UPGRADES

Upgrades engineered for the whole tower.

A cooling tower's structure, fill, water distribution and fans work as one system. Changing one part on its own can shift the problem to another, so we engineer each change for the whole tower.

Structural integrity

Decayed timber or corroded steel puts the tower, and the people working on it, at risk.

- Structural timber repaired or replaced
- Timber replaced with fibreglass (FRP) structural shapes
- Epoxy coating of steel parts

Thermal performance

Fouled, collapsed or outdated fill returns warmer water to the process.

- High-performance film fill for colder water in counterflow towers
- Grid fill, or film and grid combined, to suit water quality
- Crossflow fill upgrades and stronger fill supports
- More thermal performance from the existing footprint

Water distribution

Broken pipes and clogged nozzles leave dry zones in the fill and waste capacity.

- Distribution pipes repaired or replaced in FRP or PVC
- Improved spray nozzles that resist displacement and clogging
- Crossflow distribution upgrades

Mechanical reliability

Misalignment, vibration and worn gearboxes cause trips and unplanned outages.

- Fan assemblies, gearboxes and drive shafts repaired or replaced
- Vibration and oil-level switches
- New fan designs for more airflow and lower fan power
- FRP fan blades

HOW WE ENGINEER AN UPGRADE

01
Measure
Thermal performance test to CTI ATC-105 and a condition survey

02
Design
Thermal and structural calculations in-house, aligned with the tower OEM

03
Rebuild
Our own teams, tools and stocked parts on site

04
Verify
Agreed performance verified through post-completion testing, where specified

FEATURED PROJECT

Replaced at 23 metres — without stopping the unit.

Sulphur export unit, major gas plant, Eastern Province.

A timber crossflow tower had reached the end of its life on a unit that could not be taken offline.

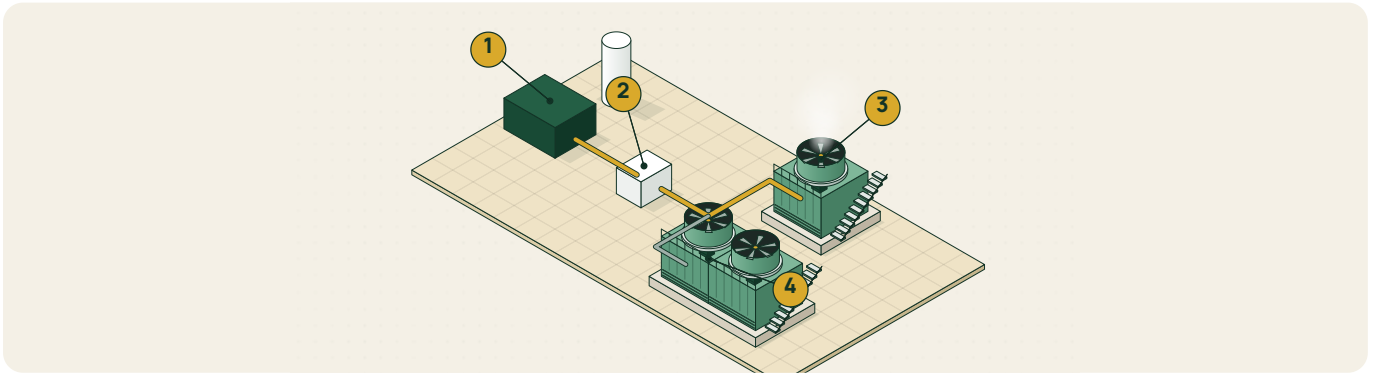
Replaced it with a non-metallic FRP counterflow tower at 23 m basin level, while a temporary system — cooling tower, plate heat exchanger and circulation pumps — kept the unit running.

- No unit shutdown
- Work at 23 m basin level under strict safety controls
- Temporary tower, plate heat exchanger and pumps supplied and run by our team





HOW THE UNIT KEPT RUNNING

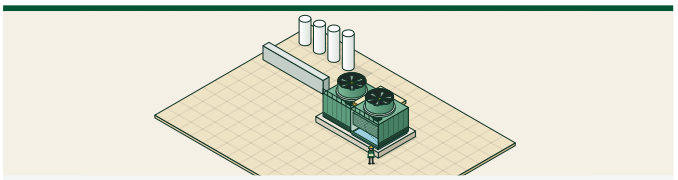


1 Process unit 2 Plate heat exchanger 3 Temporary tower carrying the load
4 Permanent tower being replaced

PROJECTS

More cooling, less downtime.

Selected rehabilitation, upgrade and emergency projects for energy producers and large campuses in Saudi Arabia and Bahrain.



NGL PLANT · ABQAIQ

Wet-section structure upgrade

PROBLEM

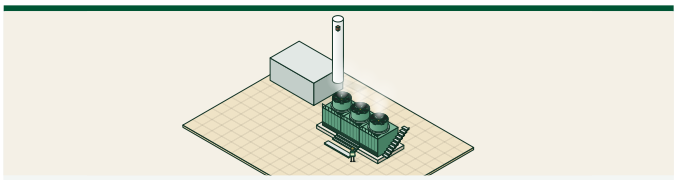
The timber structure of a combined cooling tower's wet section, including its hot-water basin, had deteriorated.

SCOPE

Replaced the complete timber structure and hot-water basin with FRP sections.

RESULT

Timber to FRP, complete structure



POWER PLANT · BAHRAIN

Emergency fan blade repair

PROBLEM

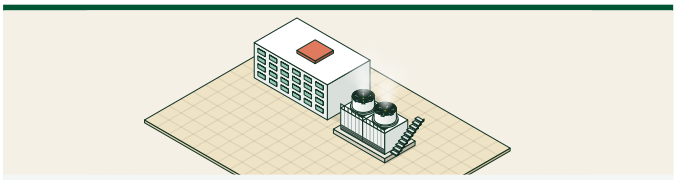
FRP fan blades across a bank of cooling tower fans were damaged and needed urgent repair.

SCOPE

Repaired the FRP blades on all affected fans on an emergency basis.

RESULT

Full fan bank restored on emergency call-out



HOSPITAL COOLING PLANT · AL-AHSA

Timber tower to FRP counterflow

PROBLEM

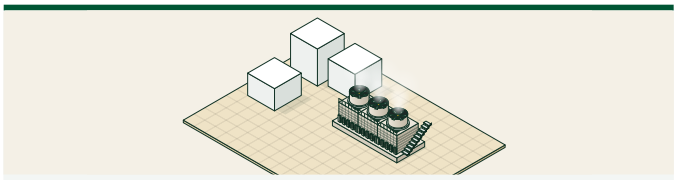
An ageing timber crossflow tower needed replacing without interrupting hospital cooling.

SCOPE

Replaced it with an FRP counterflow tower on the existing basin, using a temporary tower during the changeover.

RESULT

+25% capacity, same footprint



MEDICAL CITY · RIYADH

Concrete tower upgrade

PROBLEM

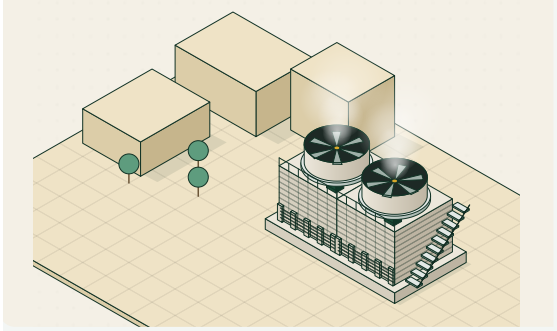
More cooling capacity was needed from an existing concrete cooling tower.

SCOPE

Replaced the tile fill with high-performance grid fill inside the same concrete structure.

RESULT

+42% capacity, same structure



UNIVERSITY IT CENTRE · EASTERN PROVINCE

Concrete cooling tower — design and supply

PROBLEM

A new concrete cooling tower was required for a university IT facility.

SCOPE

Designed and supplied the tower, including its civil structural design and ceramic tile fill.

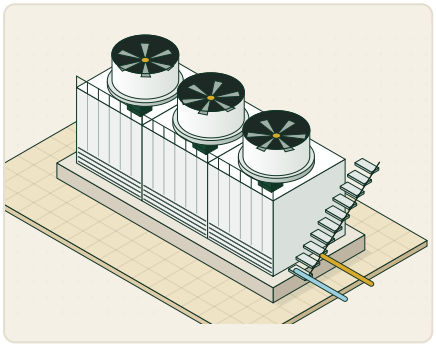
RESULT

Design and supply, including civil structural design

EQUIPMENT & COMPONENT SUPPORT

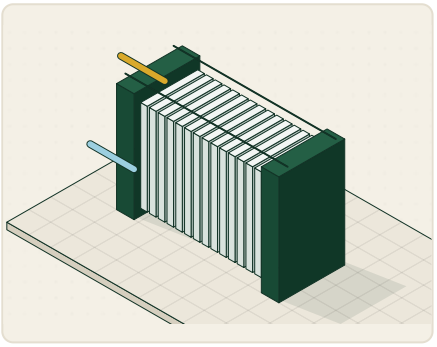
Equipment behind every rebuild and replacement.

Rehabilitation, replacement and temporary cooling often need new equipment as well as labour. We engineer, select and supply the towers, heat exchangers, pumps and filtration involved — then install and support them.



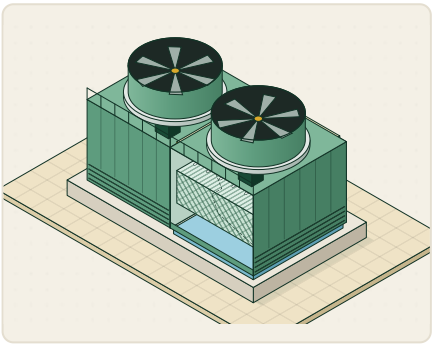
Cooling towers

Industrial cooling towers and packages.



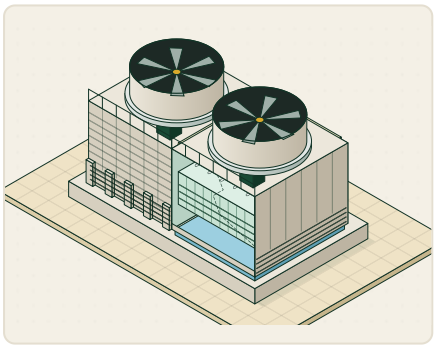
Heat exchangers

Plate heat exchangers (PHE) and hairpin heat exchangers.



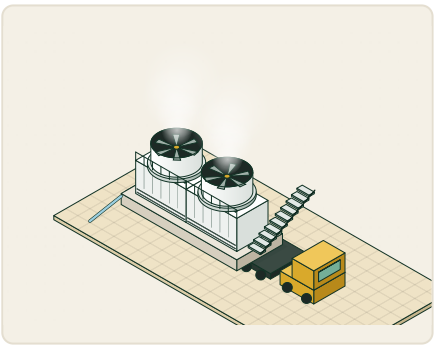
FRP cooling towers

New fibreglass (FRP) cooling towers, with FM-approved models available.



Concrete cooling towers

Design and supply, including civil structural design. Shown with ceramic tile fill.



Rental cooling towers

Temporary capacity for outages, upgrades and peak demand.

ALSO ENGINEERED & SUPPLIED

Seawater filters

Filtration for seawater cooling circuits.

Side-stream filtration

Side-stream and self-cleaning filtration systems.

Complete cooling systems

Towers, heat exchangers, pumps and filtration engineered as one system.

Selected for your duty

Sized to your heat load, site conditions and water quality.

Installed by our teams

Layout, erection and commissioning by the engineers who selected the equipment.

Lifecycle maintenance and spare-parts support

Maintenance contracts, stocked spares and performance testing.

SPARE PARTS

Parts on the shelf when you need them.

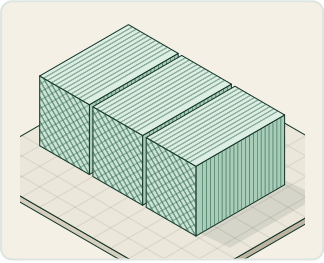
We hold the cooling tower parts that wear out most in our own covered warehouse, so they reach site quickly — even during an unplanned outage. Every component is selected for the existing tower configuration and its operating conditions.

8,200
film-fill blocks in stock

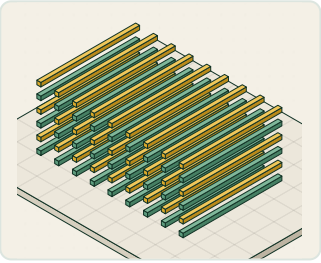
1,000 m²
drift eliminators in stock

800
spray nozzles in stock

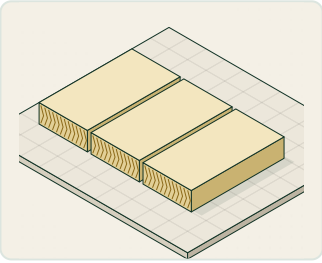
Indicative stock levels. Confirm current availability when ordering.



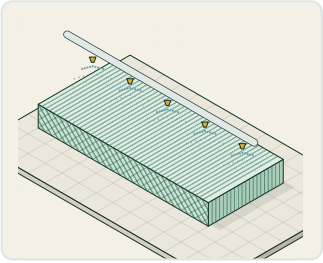
Film fills
High-efficiency film-fill packs.



Grid fills
Grid fills for industrial cooling towers.

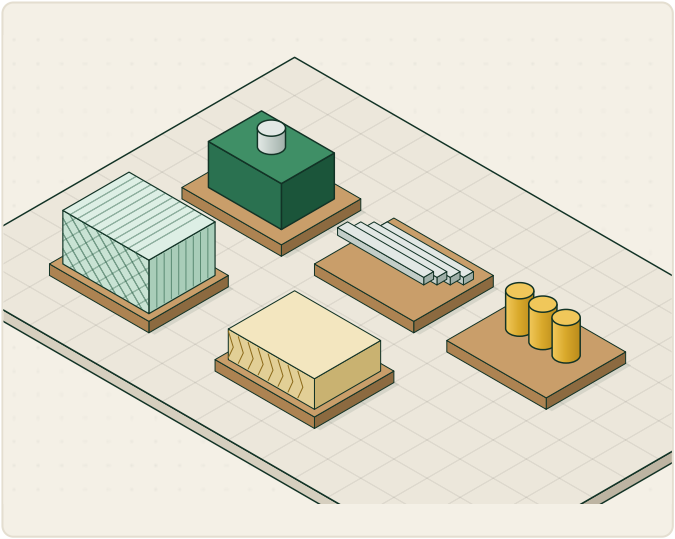


Drift eliminators
High-efficiency drift eliminators — drift rate 0.0005% of circulating flow.



Spray nozzles
Spray nozzles and water distribution parts.





Planned shutdowns
Parts staged before the window opens, so work starts on day one.

Emergency call-outs
Replacement fill, eliminators and nozzles taken straight from stock.

Upgrades
High-efficiency fill and low-drift eliminators for better performance.

RESOURCES & QUALITY

Equipped, experienced and certified.

Our own engineers, site supervisors, technicians, specialist tools and warehouse — working to the requirements of the Kingdom's leading operators.

Engineering
Thermal, mechanical and structural (FRP) engineering in-house

Site execution
Our own crews and supervision on every job

Inspection & testing
Laser alignment, vibration analysis and CTI ATC-105 thermal testing

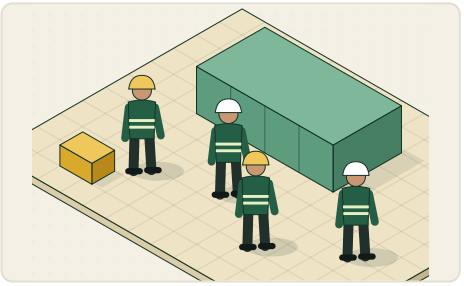
Experienced with: Saudi Aramco · Saudi Electricity Company (SEC) · Saline Water Conversion Corporation (SWCC)

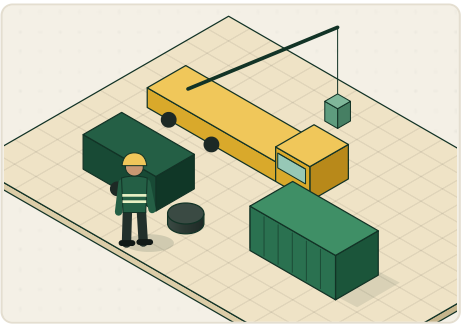
CERTIFIED SCOPE

Design, engineering, procurement, field services and maintenance operations in mechanical, **cooling systems**, electrical, instrumentation, and gas and flame detection systems.

RESOURCES

- Dedicated engineers and skilled technicians
- Covered and secured warehouse
- Fill gluing machine
- Hydro-jetting pumps
- FRP drilling and repair tools
- Torque wrenches in all sizes
- Generator and compressor sets
- Mechanical equipment alignment tool kit
- Fan blade angle setting tools





STANDARD	CERTIFIED BY	ACCREDITED	CERTIFICATE NO.	VALID TO
ISO 9001:2015 Quality management	SOCOTEC UK	UKAS	SCUK007060QM	14 Aug 2027
ISO 14001:2015 Environmental management	Recto Solutions	IAS	IAS2710141324	26 Oct 2028
ISO 45001:2018 Occupational health & safety	Recto Solutions	IAS	IAS2710451325	26 Oct 2028

ON SITE

What our teams do on site.

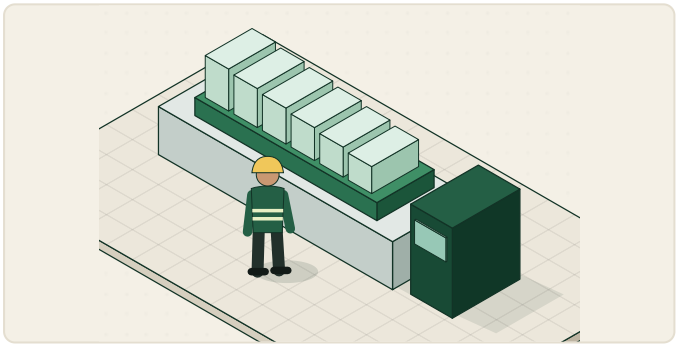
Typical work by our engineers and technicians on cooling tower sites.



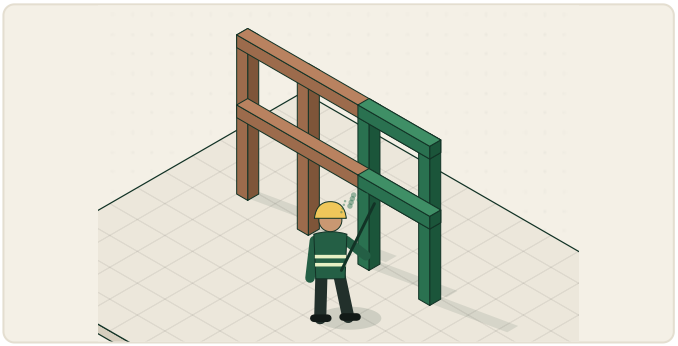
Fouled fill before cleaning



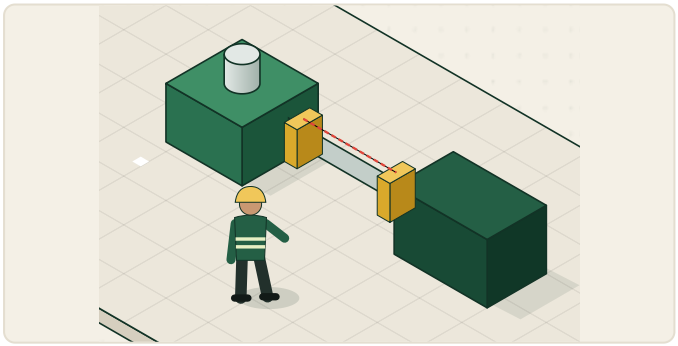
After hydro-jet cleaning



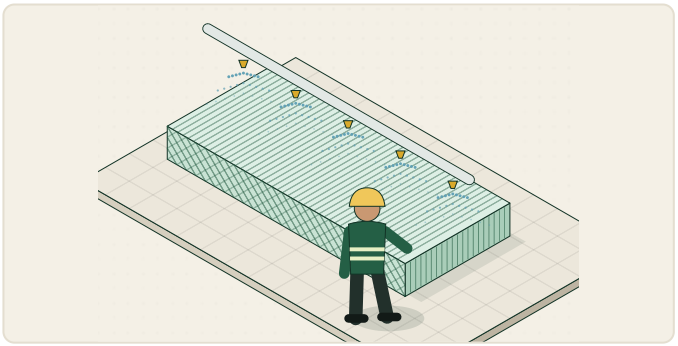
Fill gluing



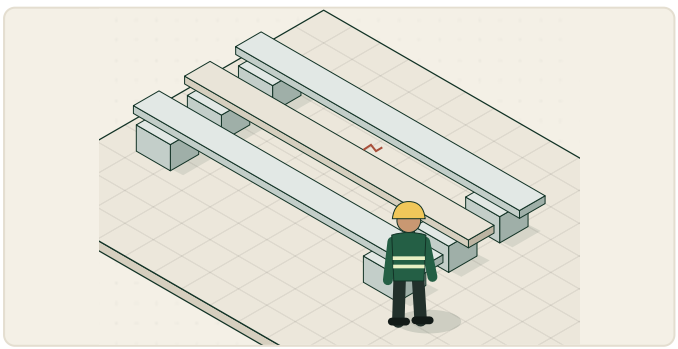
Epoxy coating of steel parts



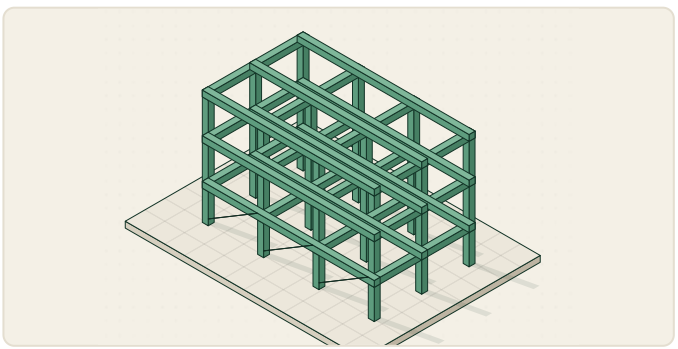
Fan, gearbox and drive alignment



Nozzle inspection and replacement



FRP fan blade repair



FRP structural frame



AL KANAR INDUSTRIAL SERVICES

Engineering, rehabilitation and lifecycle support for field-erected cooling towers.

HEAD OFFICE

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