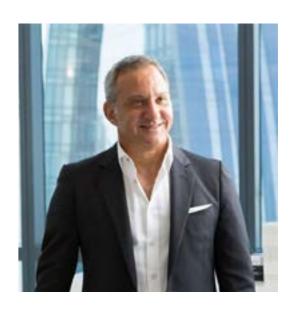


Chairman's Message



Taqeef has been defining the air conditioning market in the Middle East since its inception in 1972. Back then our focus was on finding the best technology to cope with our extreme climate, and in this regard not much has changed. We're still relentless in our pursuit of the best and we're privileged to remain the benchmark for excellence in a region where cooling is synonymous with quality of life.

We've always been driven by the desire to pioneer products and solutions that change the landscape as well as our everyday lives. When we worked with our founding partner Fujitsu General to develop the world's first cooling application for desert conditions, it was game changing. For our company, our clients and our industry. Indeed, this was to form the basis of our business blueprint, which remains true today. Partner with the best, employ the best and deliver the best. Together we have come a very long way, and celebrated many milestones and successes.

However, as our organisation grows and our footprint expands we have to keep evolving, pushing boundaries and challenging expectations.

Customer-focused innovation remains our lifeblood, and this is fed by our enduring partnerships with world-class brands. It's because of such collaborations that we've been able to keep delivering the groundbreaking technologies needed to address the unique environmental challenges of our region.

We realise that with our success comes responsibility: to our clients, partners, people and environment. Taquef's commitment now, as always, is to build our business on trust and integrity, while enriching our communities and enhancing our competitiveness.

We are on an exciting journey, and together, I believe we pave the way for a better future for Tageef, our clients and communities.



2 About Us

At Taque we find the most powerful and efficient air conditioning solutions in the world and deliver them to our clients, right here in the Middle East.

Solutions that help us all live, work and play more comfortably and contribute to a greener, cleaner world.

We've been the market leader in cooling solutions in the region for nearly 50 years. Our partnerships with Fujitsu General, Midea and Nest have seen us bring the most innovative, efficient and environmentally sound cooling technology to the UAE. Today, Taqeef engineered products and designs are used in some of the UAEs most groundbreaking developments.

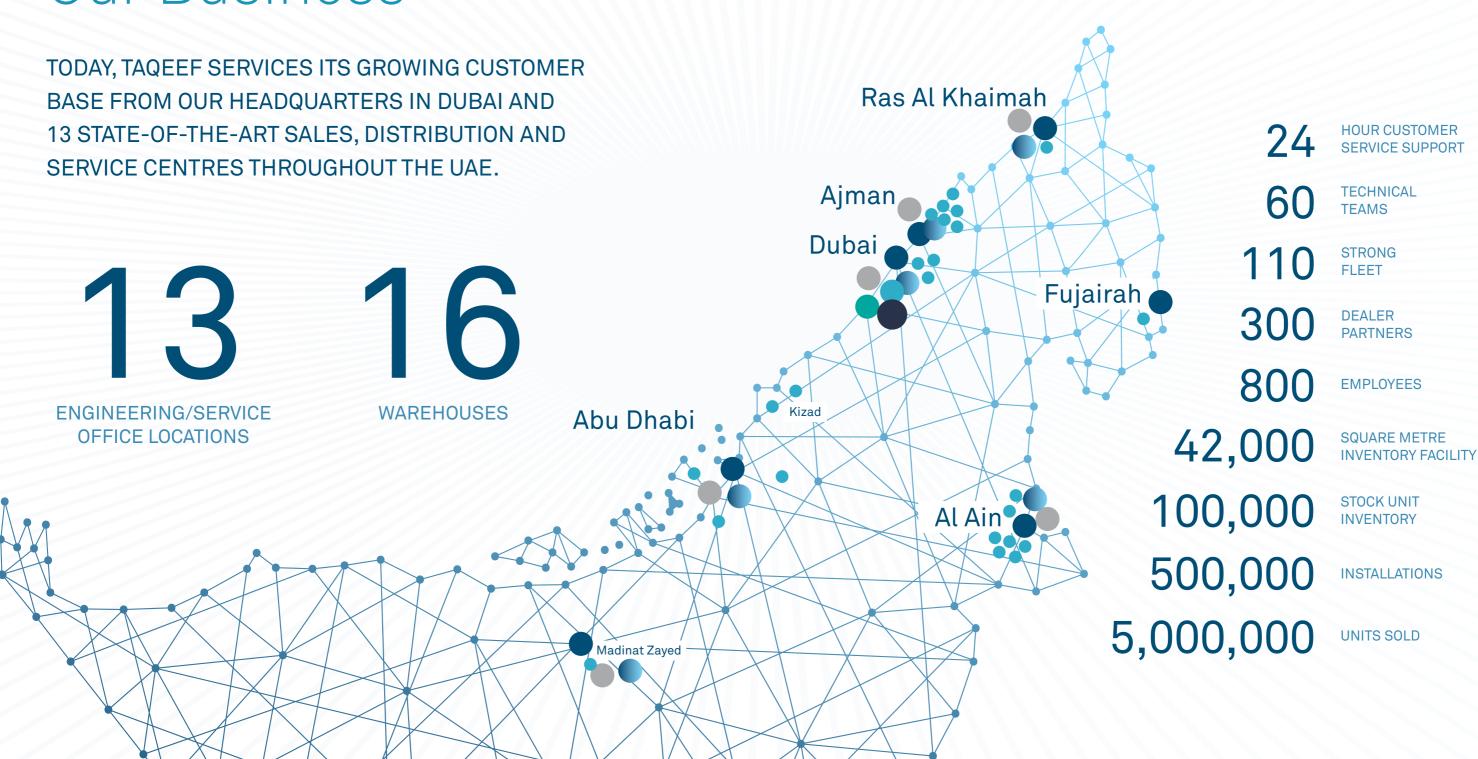
Our commitment to innovation extends to the environment too.

In 2015, we created the region's first dedicated in-house AC environmental team.

The Taquef Energy Solutions Division specialises in energy studies, retrofitting, labelling and district cooling - delivering cost and energy savings in line with UAE government targets on energy efficiency.

At Taqeef, we believe our environment deserves our best thinking and our best technology.

3 Our Business



SERVICE CENTRE

SHOWROOM

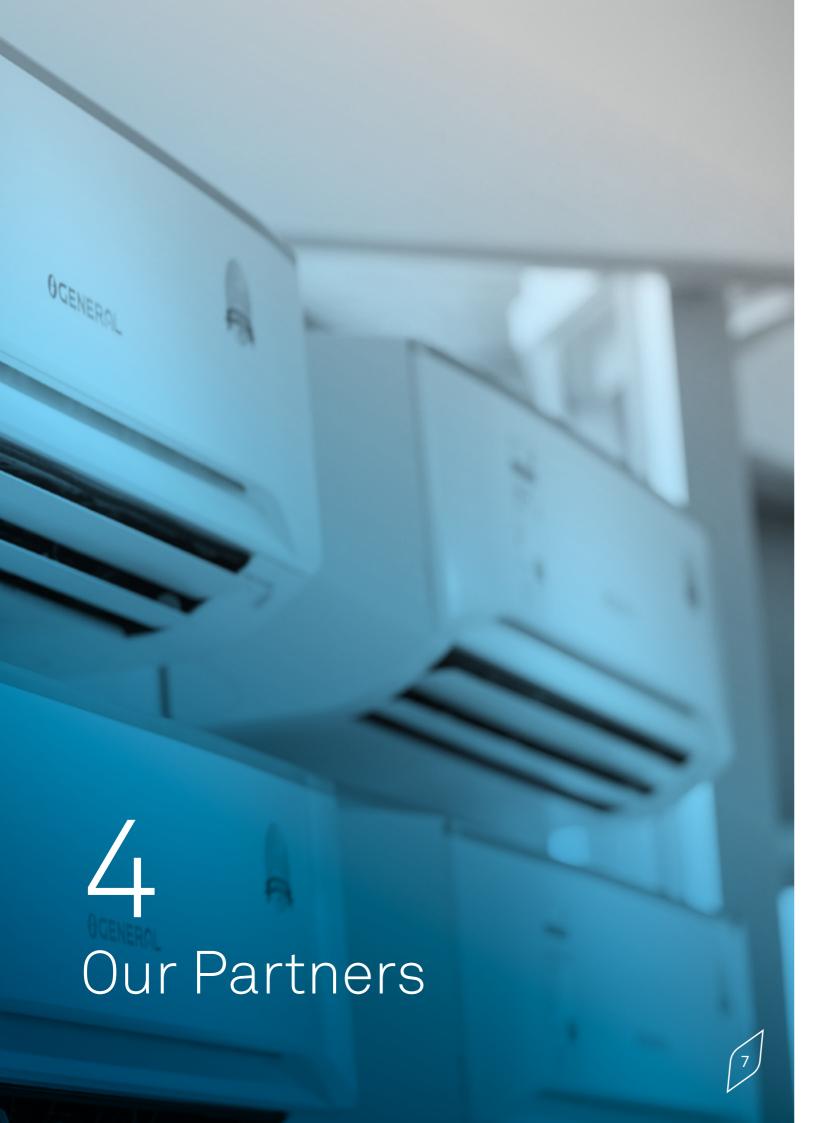
TECHNICAL & TRAINING CENTRE

TAQEEF HQ

WAREHOUSE

OFFICE

WAREHOUSE/TRAINING CENTRE



OGENERAL

FUJITSU GENERAL

Fujitsu General is the Middle East's biggest selling air conditioning brand. Renowned for their superior product performance and innovation, they are the originators of extreme weather cooling solutions for the Middle East.

In 1972 they revolutionised the market with the first and only desert specified AC unit that could cope with the challenges of both extreme heat and sand. They have been setting industry standards for cooling ever since.

Fujitsu General has brought many other world and industry first technologies to the market and the region; an automatic self-cleaning filter system, optimal airflow control technology, and the first full range of ESMA and QCC accredited ducted and split units.

The company's technology is driven by their unique customer insight and deep understanding of the region, its climate and its people. This knowledge drives the ongoing development of new air conditioning applications which offer the most effective and energy efficient cooling for domestic and commercial environments. Research and innovation lie at the heart of every Fujitsu General product, all of which undergo extensive testing at the company's R&D facilities in Japan, China and Thailand.

Fujitsu General's product performance, environmental impact and unrivalled quality continues to set the standard in an increasingly competitive market. Fujitsu General units remain the most requested and recommended in any new project in the Middle East.



MIDEA

Midea is the world's largest producer of appliances, the world's largest chiller manufacturer, and the third biggest HVAC manufacturer worldwide.

Headquartered in Southern China, the company has over 130,000 employees, operates in more than 200 countries and owns 21 production facilities and 260 logistics centres worldwide. With an 800-million-dollar annual investment in R&D - and a team of 550 research and development engineers operating in over 80 ESMA approved test labs - Midea is universally recognised as the consumer and professional choice for HVAC solutions.

The Group's success has been built on a tradition of innovation, excellence and accelerated research and development. Their expansive range of inverter driven residential and commercial air conditioning equipment and controls make them one of the largest volume electric motor, compressor and HVAC manufacturers in the world.

Midea's vast portfolio of HVAC products includes: split, window, portable, dehumidifier, VRF, chillers (centrifugal, screw and scroll), fan-coils, compressors, and condensing units - all featuring Midea's revolutionary technology. It's this technology that is cooling some of the most significant real estate, leisure, sports, transportation, industrial, medical, residential and educational developments around the globe.

Midea strives to establish its technological advantage through teamwork and innovation and has developed manufacturing partnerships with several major multinational brands, such as Carrier, Lennox, York, Trane and Samsung.



CLIVET

Clivet is a European leader in the design, production and distribution of cooling, heating, air ventilation and air purification systems for residential, commercial and industrial markets.

In 2016 Midea established a strategic alliance with the Italian based brand, further increasing their product offerings, market presence, supply chain and manufacturing.





nest

NEST

Nest's mission is to create a home that's thoughtful - one that takes care of the people inside it and the world around it. The company focuses on simple, beautiful and delightful hardware, software and services. The Nest Learning ThermostatTM keeps you comfortable and can help reduce energy consumption.

The Nest Learning Thermostat learns the temperatures you like and creates a custom schedule for your home. Nest turns itself down after you leave, so you're not cooling an empty home. And you can control it from anywhere using your phone.

Nest products are sold in 20 countries and have been installed in almost every country in the world. The Nest Learning Thermostat has helped save more than 22 billion kWh - enough energy to power the planet for one hour. And through the Works with Nest program, third-party products can securely connect with Nest devices to make homes safer, more energy efficient and more aware.

Taque is the preferred professional supplier and installer of Nest products in the UAE. Our team of in-house Nest Pros install Nest products in large scale residential, commercial hospitality, retail, leisure and public-sector developments.

5 Our Capabilities

With a customer base that's as diverse as it is impressive, we set the bar high when it comes to service and support. So, while our standard customer service provision is market-leading, we also go that extra mile to give our clients totally tailored solutions, fit for their specific needs. Our clients are unique, and so is the service we offer them.

AIR CONDITIONING UNITS AND SPARE PARTS We're using technology to transform the customer service and operational efficiencies at our business.

This includes smart-stocking our 42,000 square metre inventory and warehousing facility to ensure the quickest, most convenient turn-around time for new order requirements.

AFTER SALES SERVICE

We've elevated HVAC after sales in the region to new levels, arming our teams with intelligent tools to provide a service that's unrivalled.

Our 60 technical teams use real-time maintenance logs and digital images of inspection sites and run synchronised system diagnostics for proactive maintenance.

CONSULTANCY AND DESIGN

Our consultants use the latest industry knowledge to find simple solutions to even the most complex technical briefs. We also draw on our brand partners' expertise to create fit-for-purpose designs, and use industry intelligence to ensure the equipment size, layout, airflow calculation, ventilation, acoustic study and environmental impact is the best it can be.

ENERGY SOLUTIONS

We create energy saving proposals as standard, to ensure energy conservation measures (ECMs) and payback periods are commercially and environmentally sound. Our consultants specialise in energy studies, diagnostics, retrofitting, measurement and verification, labelling and district cooling to deliver cost and energy savings.

INSTALLATION AND COMMISSIONING

We undertake a variety of installation work, partnering with project teams, main contractors or directly with clients to create customised cooling solutions. From the supply of simple unit fittings, to the intricacies of full turnkey assignments, our approach is always collaborative and always customer-focused.

TECHNICAL SUPPORT

We provide technical support at every project stage from design to installation. Our aim is to create a bespoke solution for each project, using the latest technology - including CFD simulation and unit performance data - to guarantee superb efficiency and efficacy.

MAINTENANCE

We pride ourselves on the longevity of our products, and work with many clients on preventative maintenance contracts tailored to their needs. We also offer 24-hour support, training and knowledge-share where necessary.

TRAINING

Taque has its own training and development facility in Dubai where we run VRF, product, technology and servicing training for staff, customers, contractors or other industry stakeholders. Our advanced support also extends to control system on-site training, so that the smart technology in Taque supplied systems is always used to its full advantage.



6 Energy Solutions









LABELLING

We've worked with ESMA and QCC to help develop industry standards for labelling across the air conditioning appliance sector in the region. All Taque products meet the new labelling standards with energy consumption levels and environmental 'star' ratings visibly displayed. Our entire range is also compliant with the region's new building regulations.



RESPONSIBLE PARTNERSHIPS

We only partner with brands and suppliers who are, like us, committed to greener growth. Partners whose eco-friendly philosophy is evident in all aspects of their business. From robotic and automated production processes to technology using solar power, ATW heat pumps and DC inverter control. You'll find smart technology featuring heat recovery and economy operating modes, plus VRF intelligent management systems as standard on our new product lines.





DISTRICT COOLING

District cooling can offer significant energy savings for large-scale, high density developments such as business districts, airports, military bases, university campuses, residential towers and commercial establishments. It also offers significant reductions in carbon emissions. We believe district cooling deserves our most sophisticated technology. So, we've sourced the world's most efficient centrifugal chiller, specifically designed for district cooling use, and brought it to the Middle East.



RETROFIT

Our Retrofit Department specialises in all five cooling technologies - water and air cooled chillers, variable refrigerant flow (VRF), ducted and split units. They work with residential and commercial clients offering a full spectrum of services from energy and design audit, to measurement, verification, and LEED certification support. The highly qualified team (CEM, CMVP, PQP and LEED certified) advise on best fit solutions including HVAC upgrades or replacements, optimisation of existing designs and additional energy saving opportunities. Challenges from

OLD AC SYSTEMS

challenge

Efficiency reduction due to equipment fouling, corrosion and erosion



challenge

Deterioration of ducting, piping and insulation results in leaks



and corrosion

challenge

Systems designed for maximum load conditions. Limited control flexibility for cooling loads and ambient conditions



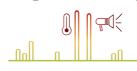
challenge

Poor energy efficiency performance at partial load conditions



challenge

High tolerance range on temperature set points and high noise levels O....



challenge

Slow start-up operation, high maintenance and parts replacement O..... costs, low reliability & availability



Opportunities for potential **COST AND ENERGY SAVING**

opportunity

Overall system retrofit using more efficient technology, including VRF, FAHU and chilled water systems





opportunity

Equipment replacement with updated technology for improved





opportunity

System design improvements including sizing and control flexibility





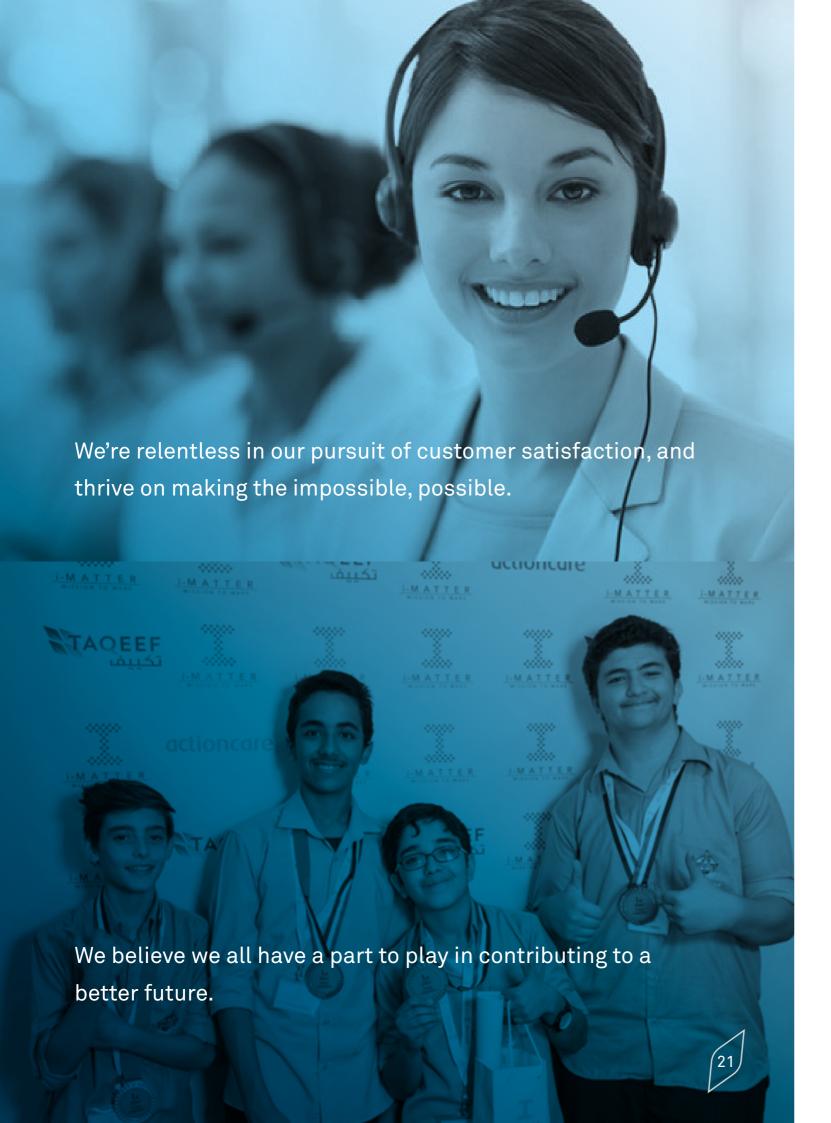
opportunity

Introduction of smart technology for cost and energy savings









Our Difference

Customer Service

World-class products deserve world-class customer support. So, we do everything necessary to make sure each Taquef customer experience is a great one.

Our award-winning customer service department has been recognised by government as a leader in its field. With a talented team of over one hundred specialised service and after care staff, ours is the biggest - and most efficient - in the region.

We set the tone in 2010 when we were the first in our industry to launch our own call centre.

And, we've continued to raise the bar since then, implementing the first fully integrated mobility workshop solution throughout our network.

These 'firsts' have allowed us to make huge strides in customer service and satisfaction. Real-time service and status updates, coupled with total traceability and issues analysis ensure we're as efficient as we can be.

So, it's no coincidence that our customer feedback ratings consistently outperform industry averages and set new standards.

CSR

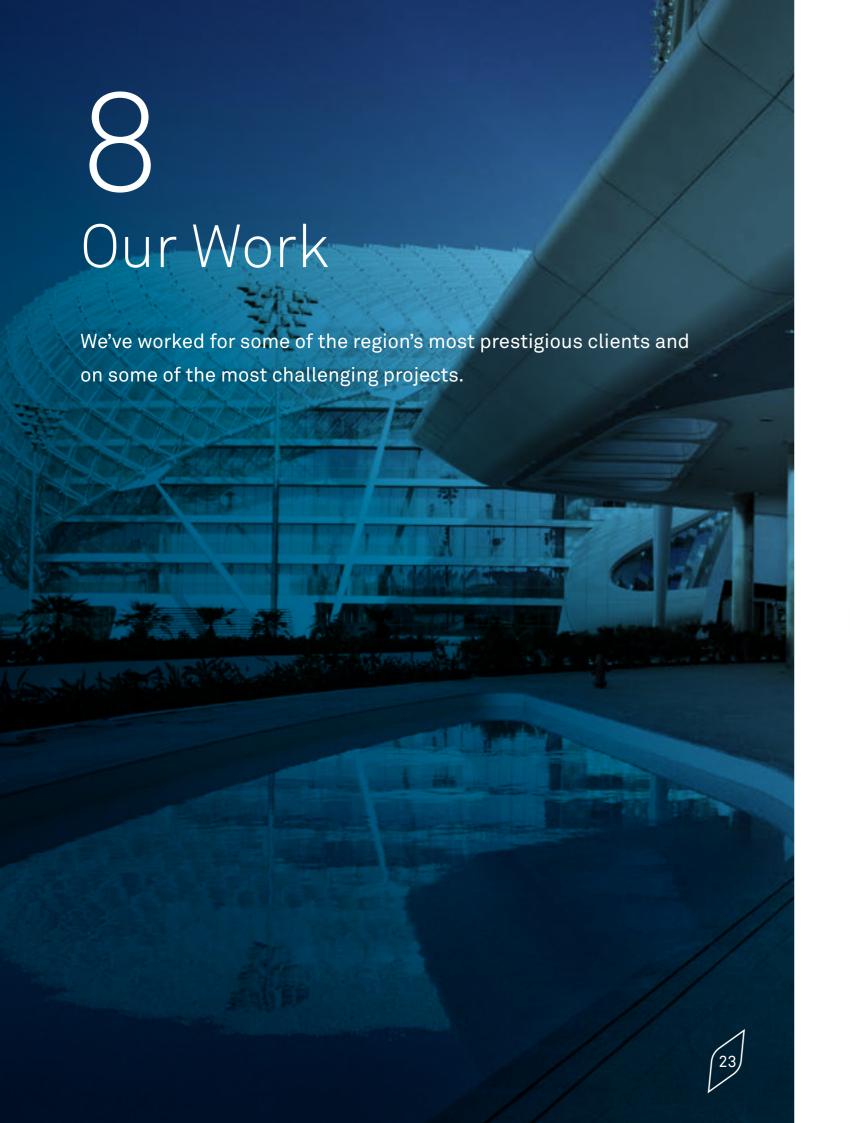
We believe we should do all we can to protect the environment and give back to the communities which make our success possible. So, we do. And, we also encourage our employees to do this too.

As the environmental challenges the world faces become more complex, so do the solutions.

So, we've created an Energy Solutions Division to ensure our most innovative thinking goes into finding solutions to the industry's biggest environmental challenges.

We're also taking the same approach with our community initiatives. We're developing dialogues with a diverse range of stakeholders and creating partnerships which deliver meaningful community programmes. Programmes that reinforce the ecological use of technology and improve the lives and prospects of today's youth and tomorrow's leaders.

We believe that everyone at Taquef has a part to play in contributing to a better future for us, our communities and the world we live in.



























وزارة التربية والتعليم دلــــم Mall Ministry of Education





























RESIDENTIAL

We've worked on some of the Middle East's most iconic housing developments, and have created many 'firsts' in this area - including the biggest VRF project in the world.



Education

CASE STUDY

Background

Taqeef has been a preferred supplier of the Ministry of Education for the last five years.

The Ministry operates an ongoing maintenance programme for schools throughout Dubai and the Northern Emirates. However, climate and logistics dictate that HVAC works can only be completed during July and August when schools are closed for the summer break.

Challenge

While many school system upgrades are planned throughout the year the need for system upgrades and maintenance is often only identified during the summer period. This leaves little time for stock ordering and installation time-tabling.

Solution

Taque has created a bespoke schools service model to ensure Ministry of Education projects can be successfully completed at short notice.

This includes:

- Operating a multi-shift model of 125 teams which ensures non-stop work during July and August on all sites around-the-clock.
- Using a digitalised and intuitive spare parts stocking procedure.
- Increasing stock-holding on key unit types (using visibility on past and projected MOE orders).

Taqeef has installed and commissioned more than 30,000 AC units in over 500 schools throughout Dubai and the Northern Emirates.

We have completed all projects on time and to budget and have received letters of appreciation and commendation from the Ministry of Education for our impressive work and exemplary service.



Public Sector

CASE STUDY

Background

Taqeef has been working for the Command of Military works in the UAE for the past twenty years. We are proud to be their HVAC supplier of choice and to have been entrusted to complete many critical installation projects all over the world.

Challenge

Our best-in-class technology, design and service teams have supplied more than 100,000 units to the Command of Military Works since we first began working with them in 1997. The cooling challenges for this client are diverse and often complex and critical. In order to meet these demands, Taqeef created a tailored service and support provision which guarantees the client's demands for flexibility, high stock holding and pan-regional (and often emergency) technical support are always met. This includes:

- Up weighting minimum stock holding levels on all specified window AC, DX and split AC units. We operate a smart-stocking system of 100,000 units at our 42,000 square metre inventory and warehousing facility.
- Guaranteeing an emergency response provision for short turn around work. Our 60 technical teams use real-time maintenance logs and digital images of inspection sites to deliver detailed and immediate cross-departmental updates.

This allows us to run synchronised system diagnostics, and provide proactive maintenance.

Creating a 'mobile' dedicated client account team.
 We've maintained customer service and technical continuity – even on international projects – by assigning a dedicated account team for all design and installation, irrespective of location.

Solution

Taque f has worked collaboratively with The Command of Military Works to deliver market-leading service and support, developing innovative solutions to many challenges.

We've supplied and installed 3,288 split units in 279 villas in a ten-week summer period - air-lifting in any provisions needed to complete the project within the agreed time frame. We've sent our teams on flights to install and service AC units on international assignments. And, we've consistently delivered all Command of Military Works projects on-time, within budget and with the finest cooling solutions on the market.

Our long-term relationship with The Command of Military Works has been built on trust and our absolute commitment to service and product excellence.



Hospitality

CASE STUDY

Background

DoubleTree by Hilton Resort & Spa Marjan Island is a 701-room hotel and leisure destination which enjoys a prime location on the trunk of Marjan Island, a cluster of five man-made islands in the upscale area of Al Hamra, Ras Al Khaimah.

Taque had previously worked on HVAC projects with the development's contractors - Al Ali Contracting and ATKINS.

They were looking for an AC supply partner who could meet Hilton International standards and had the design and technical capability to engineer innovative and bespoke cooling solutions.

The project's size and scope also required a partner with sufficient infrastructure and stock-holding to ensure on-time, on-budget delivery and exceptional after-sales service.

Challenge

Originally the development had been designed for a chiller system. However, Taque recommended converting it to a VRF system which would reduce service costs, reduce power consumption, reduce indoor unit sizes and reduce noise levels. It would also provide independent systems for added reliability, allow heating and cooling simultaneously

for added comfort, and save on service area and mechanical room space. The benefits made this system the obvious choice, however, the challenge came in engineering a VRF solution that could meet Hilton International's specification standards.

Solution

Taqeef's technical team — working in partnership with our international brand partners — adapted the VRF units to include a leak detection system for every room. The individual leak detectors provided optimum safety and were compatible with the building management system (BMS), Hilton International standards and covered by Taqeef's 10-year warranty guarantee.

We co-ordinated a phased installation plan with the development team and Taquef engineers rigorously tested every installation before each building was handed over individually.

Our innovative technical solutions provided the client with a bespoke, best-fit HVAC system that exceeded expectations on efficiency, reliability and safety.

While our superior service and after-care provision cemented our reputation as the go-to supplier for commercial AC solutions throughout the region.





Retail

CASE STUDY

Background

Dalma Mall is one of the largest malls in Abu Dhabi, featuring 425 regional and international retailers, a 14-screen cinema hub, a 6,300-car parking provision, and an on-site hospital.

Challenge

The mall's original designs and plans included an advanced cooling system featuring a secondary chilled water loop connected to four energy thermal stations (ETS). This was reliant on an external district cooling supply to deliver cold water to the ETS at 5.5° C with a return of 14.5° C.

When the external district cooling suppliers were unable to provide the cold-water supply, the mall development team faced a complex and serious problem. The only identified solutions to the issue involved building an on-site district cooling plant.

Solution

Taqeef's engineering and technical teams devised a solution to fit a cooling plant inside the mall premises which would free-up the on-site real estate (already allocated for a hotel) and save over one hundred million dirhams in projected civil work, design and infrastructure costs. By specifying high efficiency Midea chillers, Taqeef were able to deliver the same cooling efficiency as a district cooling plant within a tight budget and short time frame.

Outcomes

The in-mall centrifugal chiller plant has been operational since 2015 and has consistently demonstrated outstanding performance, exceeding client and design consultant expectations. The chiller efficiency at zero tolerance and peak conditions achieved 0.66 kW/tonne, while a total plant efficiency of 0.85 kW/tonne was independently measured and verified at peak August conditions.

These market-leading measurements have been achieved despite the absence of a thermal storage tank, and using a parallel primary variable flow configuration (instead of a series of counter flow plants). Independent audits indicate this outperformed the market, making it the most efficient centrifugal chiller solution in the world at the time.



Residential

CASE STUDY

Background

Ain Al Fayda is a comprehensive, mixed-use, masterplanned community consisting of 5,000 villas, catering to an estimated 60,000 population base.

The project is one of the largest and most important housing developments in Al Ain. Developers Al Qudra and Tamouh were mandated by Abu Dhabi's Urban Planning Council (UPC) to find an Air Conditioning supply partner who could deliver a turnkey solution, guaranteeing both service and technical excellence.

Challenge

The design and technical specifications for the development were high: world-class cooling, intuitive controls, high-end aesthetics and Pearl 2 ratings.

Solution

Taqeef were able to address all specifications and service expectations by developing a full design, service and support package, which involved:

 Using the latest industry intelligence on equipment size, layout, airflow calculation, ventilation, acoustic study and environmental impact to design a VRF system that could operate at 56-degree outdoor temperature without tripping.

- Designing-in an occupancy sensor to meet Pearl 2 standards.
- Operating a build and test-run of the system in three 'mock-up villas'.
- Developing a full-spectrum service and maintenance package.

Despite initial reservations about single supply risks, Taquef were awarded the project in its entirety. We supplied, tested and commissioned the 50,000 indoor VRF units, delivering the project on-time, within budget and to the satisfaction of developers and homeowners alike.

The Ain Al Fayda 5,000 villa development is the largest completed VRF project in the world.





Fifty years of firsts.

The world's first cooling application designed for desert conditions.

The world's largest VRF project.

The most efficient centrifugal chiller on the planet.

The industry's only purpose built 'tropical' series.

The region's first dedicated AC environmental division.

At Taqeef, we like firsts.

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