

FLIGHT DAILY NEWS



AH-1Z debut

First Lieutenant Abdulla Ghaleb Aljabri (left) and First Warrant Officer Hisham Saleh Alshafee with one of Bahrain's newly delivered Bell AH-1Z "Zulu" attack helicopters, that made an unexpected appearance on the static display yesterday. Full story P10.

BillyPix

MENA's MRO move

Murdo Morrison

The region's flurry of airline start-ups and burgeoning single-aisle fleet has spurred MENA Aerospace to launch Bahrain's first maintenance, repair and overhaul business with US specialist Aviance Global.

The collaboration will be announced at a ceremony at the show today.

The MENA Technics-branded venture will see MENA expand its hangar at Bahrain International from the current two bays to three.



BillyPix

However, it has also submitted longer-term plans for an additional two-bay narrowbody facility.

The European Union Aviation Safety Agency Part 145-accredited business will serve commercial airlines and private jet operators.

"There has been a huge growth in the fleet in this region," says Dr Mohammed Juman (pictured), founder and managing director of MENA Aerospace.

The initiative "supports the kingdom's efforts in strengthening its position as a key aviation and logistics hub", he adds.

The two companies plan to

expand to Saudi Arabia "in the near future".

Phillip Edinborough, chief executive of Aviance, says MENA was "the obvious choice" for its expansion into the Gulf. "This partnership enhances the services and expertise offered in Bahrain and paves the way for further expansion," he says.

Yesterday MENA unveiled a partnership with Singapore-based Asia Cargo Network, which will see the companies operate an eventual 13 narrowbody freighters in the region, and plans to add a Boeing 767 in the next three months.



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Royal Jordanian picks P&W

Craig Hoyle

Royal Jordanian and Pratt & Whitney have signed propulsion contracts to equip the carrier's future Airbus A320neo-family and Embraer E-Jet E2 aircraft with geared turbofan (GTF) engines. The engine producer will respectively supply PW1100Gs and PW1900Gs to equip up to a combined 30 of the airliners.

Samer Majali, chief executive of the Amman-based carrier (right), said replacing its current fleet of narrow-bodies and regional jets within the next three to five years will enable it to benefit

from the GTF design's "industry-leading efficiency".

Royal Jordanian in early October selected the Airbus single-aisle for an up-to 20 aircraft need to replace its current A320neos, without disclosing an engine selection. Days later, it also announced a plan to operate up to 10 new E-Jet E2s.

Majali said Royal Jordanian will field 12 A320neos in a 150-seat, two-class configuration, and three all-economy examples of the same model capable of accommodating 180 passengers. It also will take five A321neos. He says all the aircraft will be sourced from lessors, as Airbus would otherwise not be able to supply it with new



twinjets until at least 2028-2029.

It also will introduce up to six E190-E2s and four E195-E2s. Majali says eight will be leased, with the last two to potentially be purchased by the airline.

The propulsion deal has a potential list price value of around \$500 million, with an associated "long-term, comprehensive service agreement" worth up to an additional \$1 billion, says Mark Cryan, P&W's commercial engines vice-president, customer business India, Middle East & Africa (left).

"Aircraft deliveries are expected to begin in late 2023," according to the engine supplier.



Textron shows its teeth

Beechcraft's AT-6 Wolverine is among the attractions on show in the static display, with the Textron group company hoping to take a bite out of the international market for armed light-attack aircraft.

Textron Aviation Defense has a strong appetite to attract additional buyers for the E-model Wolverine, eight of which are currently on order for the Royal Thai Air Force.

The US Air Force also has already obtained a pair of the aircraft, and earlier this year conducted a series of exercises from Moody AFB in Georgia in collaboration with pilots from Thailand, plus Colombia, Nigeria and Tunisia.

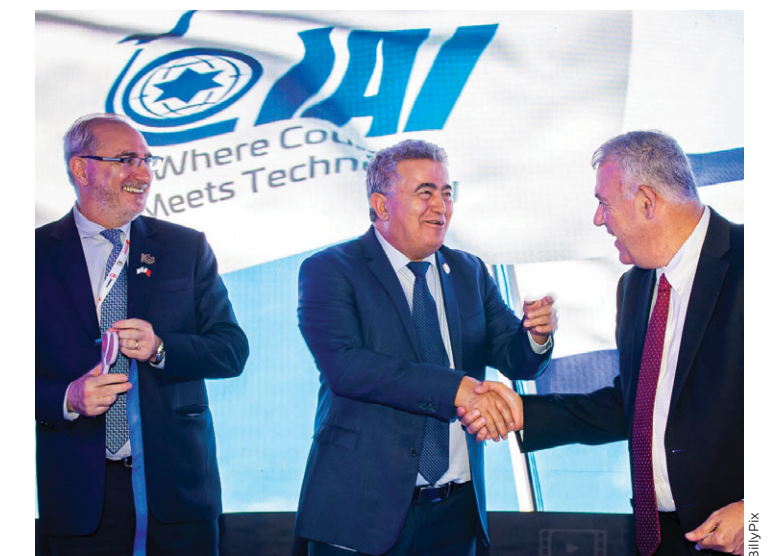
Israel cuts ribbon on new friendship

The milestone first appearance at a Bahrain show by Israeli companies was celebrated with a ribbon-cutting ceremony yesterday.

Israel's ambassador to Bahrain, Eitan Na'eh (left), participated in the event, alongside Israel Aerospace Industries chief executive Boaz Levy (right) and company chairman Amir Peretz (centre), along with Yair Kulas, head of the nation's SIBAT export body.

"It is a great privilege to honour the vision of the leaders of Israel and Bahrain and other countries in this region with the Abraham Accords," Levy said. "Our obligation is to pave the way toward the future and to bridge the gaps of so many years."

"I believe that IAI is the company that can do it all," he added, pointing to both its commercial and defence activities. "There is a huge potential of doing business



together."

Other leading Israeli companies Elbit Systems and Rafael are also exhibiting at the show, along with the Israel Airports Authority, avionics producer Excalibur Systems, battery specialist

Meircell and microgravity services firm SpacePharma. "Together we are safer and stronger," said Na'eh of the historic agreement reached between Israel, Bahrain and the United Arab Emirates in 2020.

Vision of the future



The Gulfstreams and Dassault Falcon 7X may be the VIP types grabbing the lime-light here at the show, but Stefano Cestarelli (pictured) says the smallest business jet on the static - the Cirrus SF50 Vision Jet - is also attracting plenty of attention.

Dubai-based Cestarelli, the regional sales director for the US brand, says the single-engined jet's market here is much as it is in the rest of the world - owner

pilots who want to combine the joy of flying with the convenience of a fast transport they can use for business and pleasure.

Buyers in the region have placed nine orders for the Williams FJ33-powered jet, although none has yet taken delivery. Cirrus builds around 100 SF50s a year, but the global backlog is about four times that, meaning that a new jet ordered today will not arrive until 2026.

L3Harris highlights F-16's Viper Shield

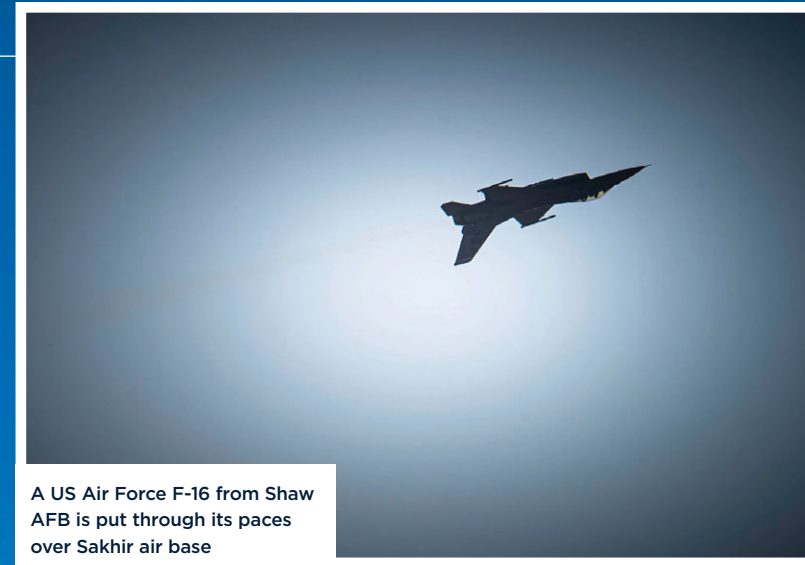
Electronic warfare (EW) and carriage technologies are among the technologies L3Harris is showcasing here.

The Viper Shield EW system is designed for the Block 70/72 variant of the Lockheed Martin F-16. The Royal Bahraini Air Force (RBAF) is a launch customer and joins Bulgaria, Morocco, Slovakia and Taiwan in equipping their F-16s with the equipment.

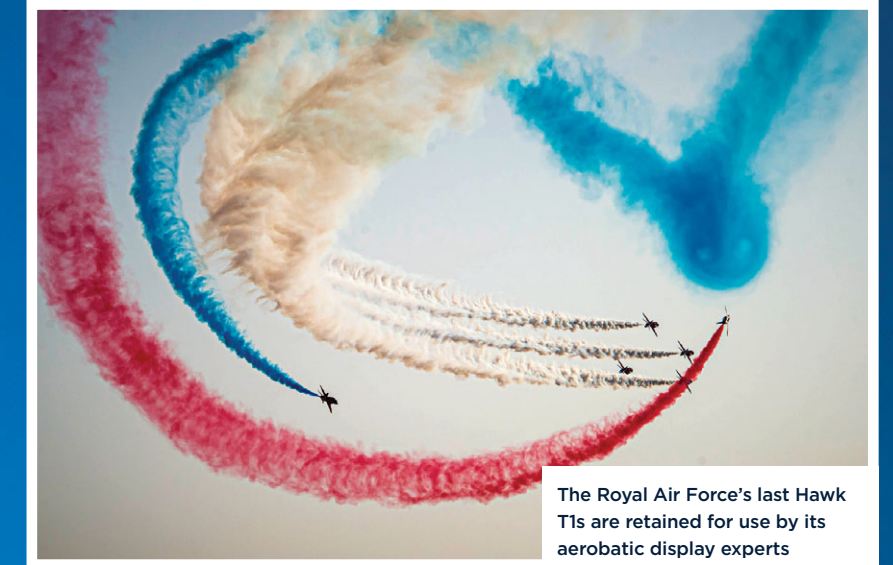
The BRU-57/A smart multiple carriage rack increases the storage capacity of aircraft, says L3Harris, and is used by air forces all over the world, including the RBAF. It is compatible with Block 40 and above versions of the F-16.



The UK's Red Arrows (also our main image) are making a debut Bahrain show appearance



A US Air Force F-16 from Shaw AFB is put through its paces over Sakhir air base



The Royal Air Force's last Hawk TIs are retained for use by its aerobatic display experts



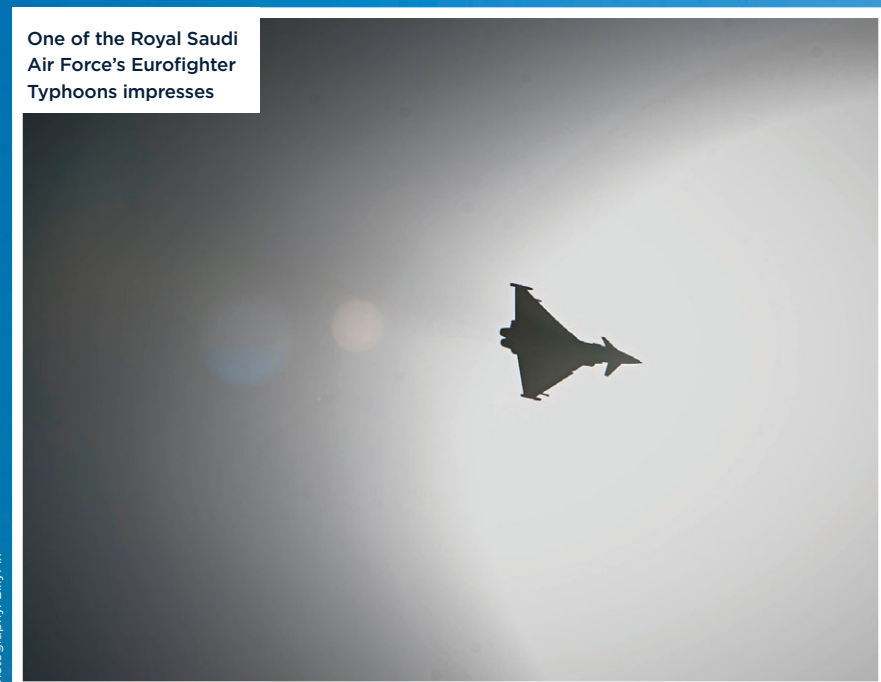
Flag carriers: the Al Fursan team are among highlights on show from the United Arab Emirates



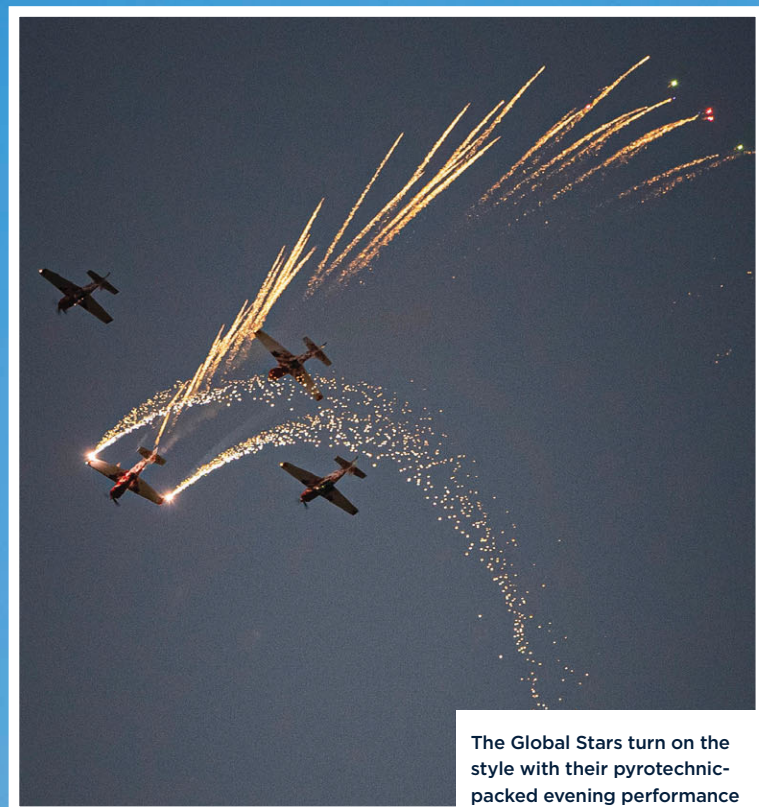
One of DHL's Bahrain-based 767 freighters is a colourful addition to proceedings

Skies alive

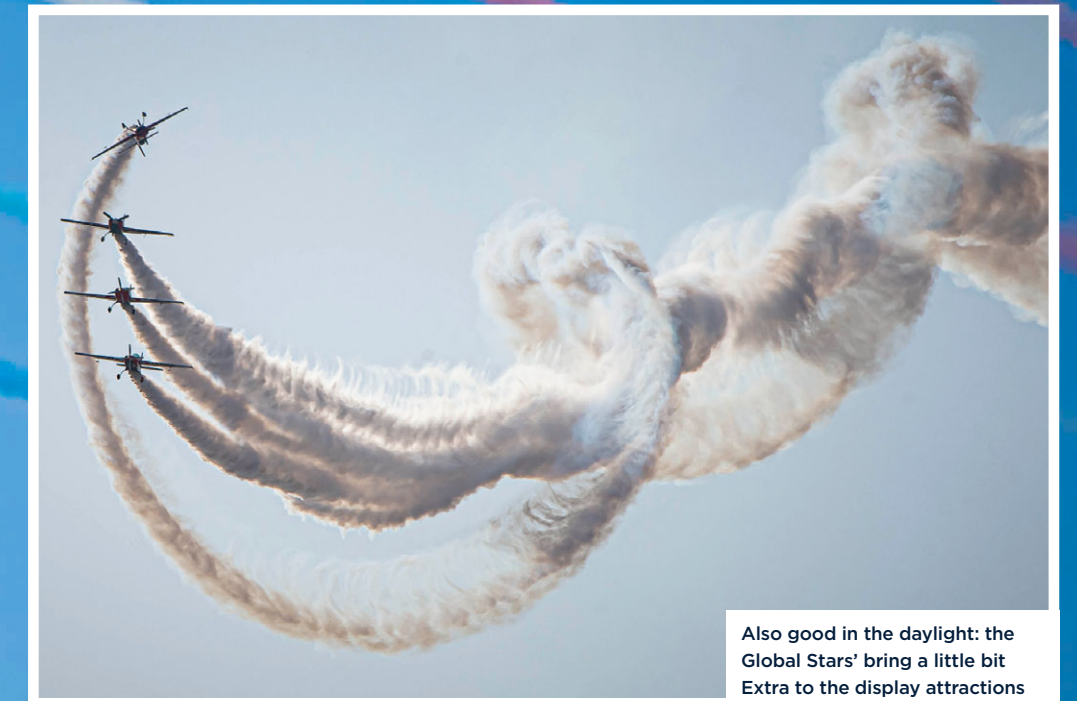
The flying display is a highlight of any air show, and Bahrain is no exception. Our photographer captured the best bits of the day one aerial bonanza



One of the Royal Saudi Air Force's Eurofighter Typhoons impresses



The Global Stars turn on the style with their pyrotechnic-packed evening performance



Also good in the daylight: the Global Stars' bring a little bit Extra to the display attractions

Photography: BillyPix



Meals on the move

Two years ago, Jordan's leading food services provider Loyalty Support Services diversified into meals ready to eat, known as MREs, used as military ration packs or humanitarian aid for civilians. It already supplies the country's armed forces. The company is marketing its range of MREs and other meal packs at the show alongside its new Bahraini distributor A Lateef Khalid AlAujan & Sons Group, which is responsible for importing brands from the likes of Mondelez and Unilever to the kingdom.

Both companies believe there is a potential market in the region for the service, as meals are Halal certified, based on a Middle Eastern menu, and can be customised according to budget, religious or cultural needs, or calorie count, says board member Mohamed A Lateef AlAujan (pictured). Each MRE pack contains an entrée, starch such as rice, pasta or potatoes, a snack, dessert, a cold and warm drink, as well as disposable cutlery and a heating bag.

FLIGHT DAILYNEWS

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Sisters are doing it for themselves

Murdo Morrison

In 1929, pioneer aviator Amelia Earhart hosted a meeting for the small band of female flyers in the USA at the time. Just under 100 turned up, hence the name of the Ninety-Nines, the International Organization of Women Pilots.

More than nine decades later, the association's Arabian section, set up in 1989, is the fastest growing, with more than 90 members, and several of them are at the show to promote the Ninety-Nines.

They include (from front) Waad Al Dosseri, a former senior first officer with Gulf Air and vice-governor of the section, Houda Matar, a first officer with Lebanon's Middle East Airlines, and student pilot Flora Belle El Armail, also based in Lebanon.

"Anyone with a licence can be a member," says



Al Dosseri. "Our members include airline, helicopter, executive jet, glider and student pilots."

Attitudes to women pursuing careers as pilots are changing fast in the region, she says. "At one

time there were many cultural barriers, but we are seeing more and more female pilots every year."

The organisation will hold its conference in Jordan next year, because of the pandemic its first

since 2019, where it will announce the latest recipient of the Yvonne Trueman Scholarship, which awards a grant to a member to help them achieve their aviation aspirations.



Red all over the show

Meet the team who delivered your copy of *Flight Daily News* this morning. Although we are making our debut at the Bahrain International Airshow, FlightGlobal publishes *Flight Daily News* and sister publication *Flight Evening News* at industry events around the world, with our distributors, in their unmistakable red flight suits, the face of the brand.

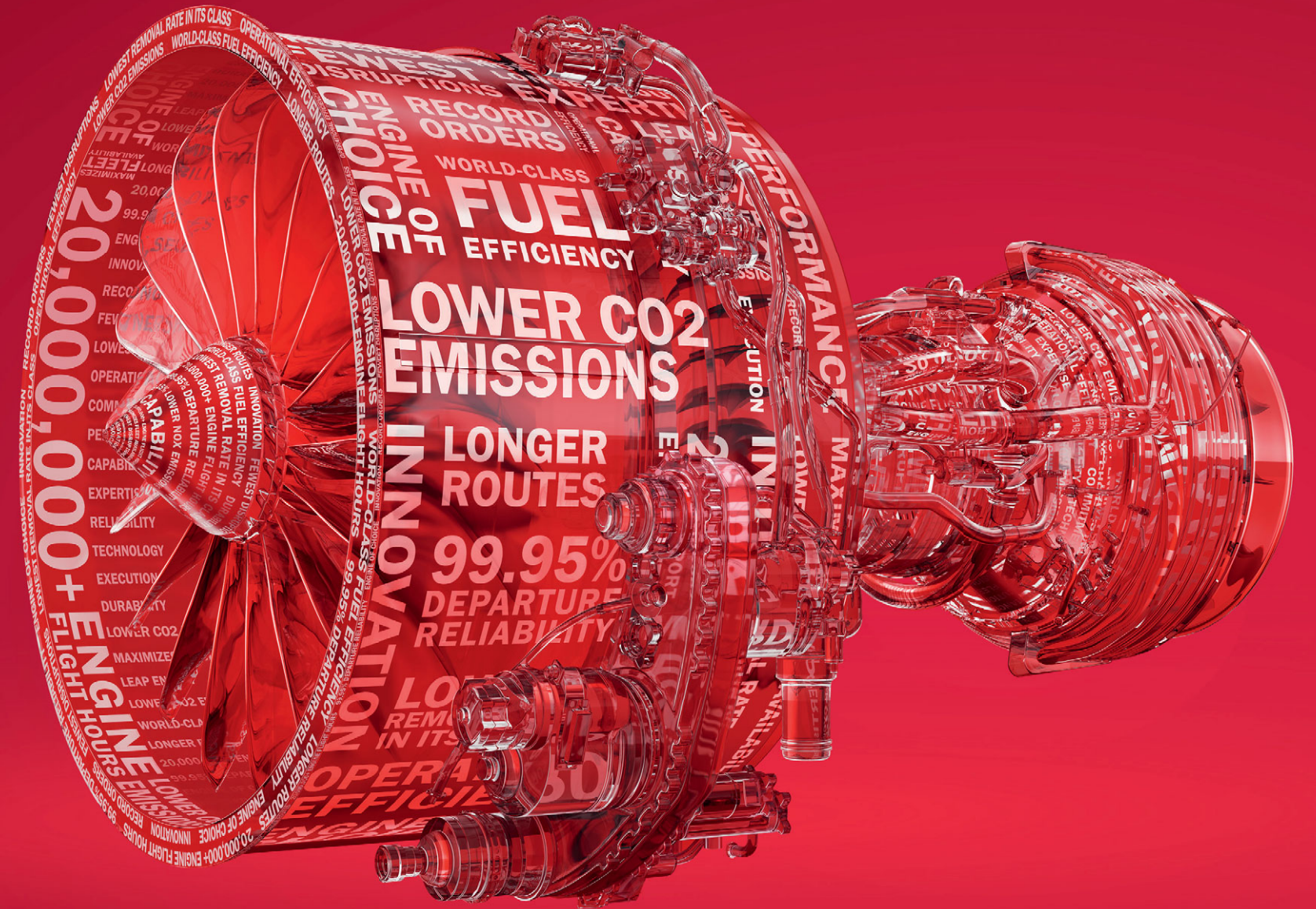
Stall mod cons

Freight airline Texel wants to transport your racehorse in ultimate comfort and has this mock-up of its in-flight stall - together with equine model - on its stand.

The enclosed container is transported directly to and from a ground vehicle, which causes the animal less potential distress and saves time compared with an open stall, says Gavin Lawlor, commercial manager with the Bahrain-based company. It is also quieter and the roof prevents the horse from rearing if startled.

Texel can fit up to 21 of these stalls - each able to accommodate two horses - on its Boeing 737-800s, or 15 on its -300s. Texel has invested in seven of the units as it looks to become the recognised equine transport specialist in a region where horseracing is a passion for many.

Pictured is Rabab Alkhanaizi, senior finance officer for Texel.



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Zulu debuts

RBAF Bell attack helicopter makes a surprise appearance on first day of show



Craig Hoyle

One of Bahrain's newly delivered Bell AH-1Z attack helicopters broke cover on the show's opening day, with the "Zulu" appearing in the static display.

Manama in November 2018 ordered 12 of the rotorcraft, with the deal having an estimated value of more than \$900 million.

The aircraft making its debut appearance - which carries the registration 2201 - is one of six Royal Bahraini Air Force (RBAF) examples delivered to the country since earlier this year, Bell H-1 programme director Mike Deslatte told *Flight Daily News* yesterday.

"This is the first presentation of an FMS [Foreign Military Sales] AH-1Z anywhere

in the world, so we're really excited," he noted.

Bahrain's newest air force assets arrived from mid-year aboard freighter aircraft, but had not been displayed publicly before.

"We'll have all the rest of them built and completed by the end of this year," Deslatte said, with work on the total production programme around 75% complete at the company's Amarillo site in Texas. Bell also has already delivered a flight training device to legacy AH-1 Cobra operator Bahrain to support its introduction of the new model.

With a maximum gross weight of 8,390kg (18,500lb), the AH-1Z has a useful load of around 2,600kg - sufficient to carry a variety of air-launched weapons.

While Bahrain's armaments choice for the Zulu is

not on show, the US Defense Security Cooperation Agency in April 2018 detailed a potential package including Lockheed Martin AGM-114 Hellfire air-to-surface missiles and BAE Systems

APKWS II precision-guided rockets. The aircraft - which carries a 20mm cannon beneath its nose - can also be armed with Raytheon AIM-9 Sidewinder air-to-air missiles.

The RBAF currently operates 30 examples of the Cobra, in the E/F attack standards and P-model training configuration. The in-service assets are an average of 27 years old, Cirium fleets data shows, and the subject of an ongoing upgrade programme not involving Bell.

Meanwhile, Deslatte believes the RBAF could have a potential future need to update its transport hel-

icopter fleet, due to the advanced age of its Bell 212/412 inventory.

The company's UH-1Y "Yankee" - which features 85% parts commonality with the AH-1Z - could be a candidate if such a need emerges, but he noted: "Even our latest versions of the 412 could potentially be a good fit for the Bahrainis as well. We have got a number of different things in our portfolio that could serve them quite well."

In addition to producing Bahrain's new Zulus, Bell is under contract to build four AH-1Zs and eight UH-1Ys for the Czech Republic. All are scheduled to be delivered to the NATO member nation during the course of 2023, via the US government.

Such export business is now sustaining the H-1 programme, with Bell having

in early November handed over the 189th and last AH-1Z produced for lead operator the US Marine Corps. The service maintains an active fleet of 159 of the type, which is powered by twin GE Aviation T700-401C engines.

"We are laser focused on continuing our Foreign Military Sales and the production line of the UH-1Y and AH-1Z," he said, while declining to identify any potential future customers.

Textron company Bell is attending the show hot on the heels of securing an order at the SOFEX event in Amman to supply the Royal Jordanian Air Force with 10 Bell 505 trainers. Signed on 1 November, the deal also covers the provision of a flight training device to be installed at the King Hussein Air College in Mafrqa.

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Space has become an important part of the economic diversification strategies of several Gulf countries, including Bahrain, and is a major theme of the show this week

The final frontier

Murdo Morrison

During the Cold War, the so-called Space Race was part of the intense rivalry between the USA and the Soviet Union as both countries sought the kudos of being the first to launch a spacecraft into orbit or send a man to the Moon. There was also the military advantage that came with the ability to place a satellite over your opponent's territory, or launch ballistic missiles that could soar above the Earth's atmosphere.

Since the 1990s, the exponential growth in demand for commercial satellite-based communications and a new era of international cooperation has opened access to the cosmos to more countries, as well as private companies. Most of these new space nations view the sector as one that can spur innovation and spin-off benefits for the wider economy and society, as well as creating high-value careers.

Bahrain and the other Gulf countries are among them, and several of their space authorities are here this week. On Tuesday, on the sidelines of the show, the kingdom hosted the first meeting of the Arab Space Cooperation Group held outside the United Arab Emirates. The UAE is the most advanced in the region when it comes to space projects – in 2019 Emirati Hazza Al Mansoori became the first Arab to spend time on the International Space Station.

Dr Mohamed Al Aseeri, the chief executive of Bahrain's National Space Science Agency, describes Tuesday's event as an "important step in the march of the NSSA and its contribution to highlighting the Kingdom of Bahrain in the space sector at Arab and international levels". He believes that, while every state in the Gulf Cooperation Council is keen to nurture its own space industry, collaboration between neighbours is key.

"No single country can do this alone," says Al Aseeri, who took charge at the newly formed agency in 2018. He points to the success of the European Space Agency. "We have a dream for a Gulf or Arab space agency that will help us work

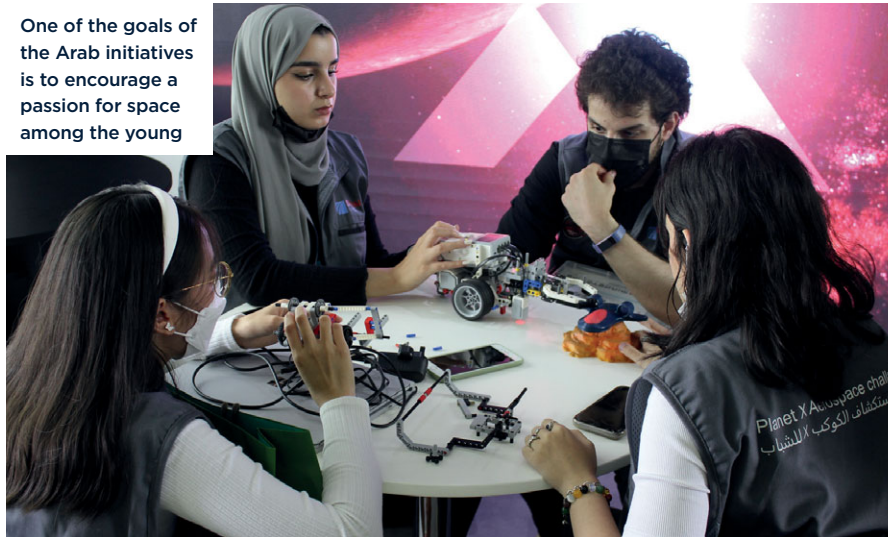
faster, cut costs, and share ideas," he says. "It is very important for our part of the world, which has perhaps moved into this field a little bit later."

The NSSA has already begun working with the UAE Space Agency and another Emirati body, the Mohammed Bin Rashid Space Centre (MBRSC), on a number of projects, including the first earth observation satellite assembled in Bahrain. Target completion date is December 2023. As part of the effort, Bahrain established in 2018 a "Space Team", a group of science graduates picked from more than 4,400 applicants.

Establishing the know how to design, build and operate an observation satellite is a "huge achievement" for a small nation such as Bahrain, argues Al Aseeri, because it means it can better protect its borders and citizens without relying on others. However, it also has the multiplier effect of helping to create a knowledge economy. "Our top priority as an agency is innovation and creativity," he says.

One of the agency's goals is to encourage a passion for space among the young. Teenagers inspired by the subject are the ones most likely to study science and go on to become innovators or choose careers in the technologies of tomorrow, from artificial intelligence to sustainable power. "Space is a sector countries must give a lot of attention to if they are interested in their future development," says Al Aseeri.

One of the goals of the Arab initiatives is to encourage a passion for space among the young



The UAE's Hazza Al Mansoori was the first Arab to spend time on the International Space Station

In its brief life, the NSSA has also contributed to efforts to formulate international space protocols through its membership of organisations including the International Astronautical Federation. It has also backed the Artemis Accords, a NASA-led initiative for space cooperation. Bahrain has signed working agreements with a total of 19 countries on several continents. It was expecting to add to that list during this week's show.

The UAE has already proven what a commitment to investment in space can reap in terms of economic benefits and national prestige. As well as providing an astronaut for the ISS, the nation has made strides in Earth observation. The Dubai-based MBRSC, established in 2006, builds and operates satellites, offering imaging and data analysis

to clients around the world. The UAE launched its first two satellites – DubaiSat-1 and DubaiSat 2 – in 2009 and 2013, respectively.

The launch in October 2018 of the first 100% UAE-designed and manufactured Earth observation satellite, KhalifaSat, "cemented the country's position among the world's leading technology manufacturers", says MBRSC. Another, even more ambitious programme has been the Hope Probe Emirates Mars Mission, which in 2021 became the first of its kind from the Arab world to reach Martian orbit. Its aim is to gather scientific data from the Red Planet's atmosphere.

The MBRSC is also preparing for the imminent launch of its inaugural lunar mission, a partnership with ISpace of Japan, a company that has the ultimate objective of finding water on the Moon. The Japanese company's Hakuto-R lander will deliver the Emirati-built Rashid rover exploration vehicle to the Moon's surface, after blasting off from Cape Canaveral in the USA on a SpaceX Falcon 9 rocket. According to reports, 22 November is the most likely launch date.

Saudi Arabia may be a bit later in coming to the game, but it too has bold ambitions for space, with the Saudi Astronaut Programme part of the kingdom's Vision 2030 economic diversification plan. The country is poised to launch a national space strategy, aimed at boosting its "competitiveness in areas such as science, engineering, and research and innovation". One of the astronaut programme's aims is to send a Saudi woman into space. ▶

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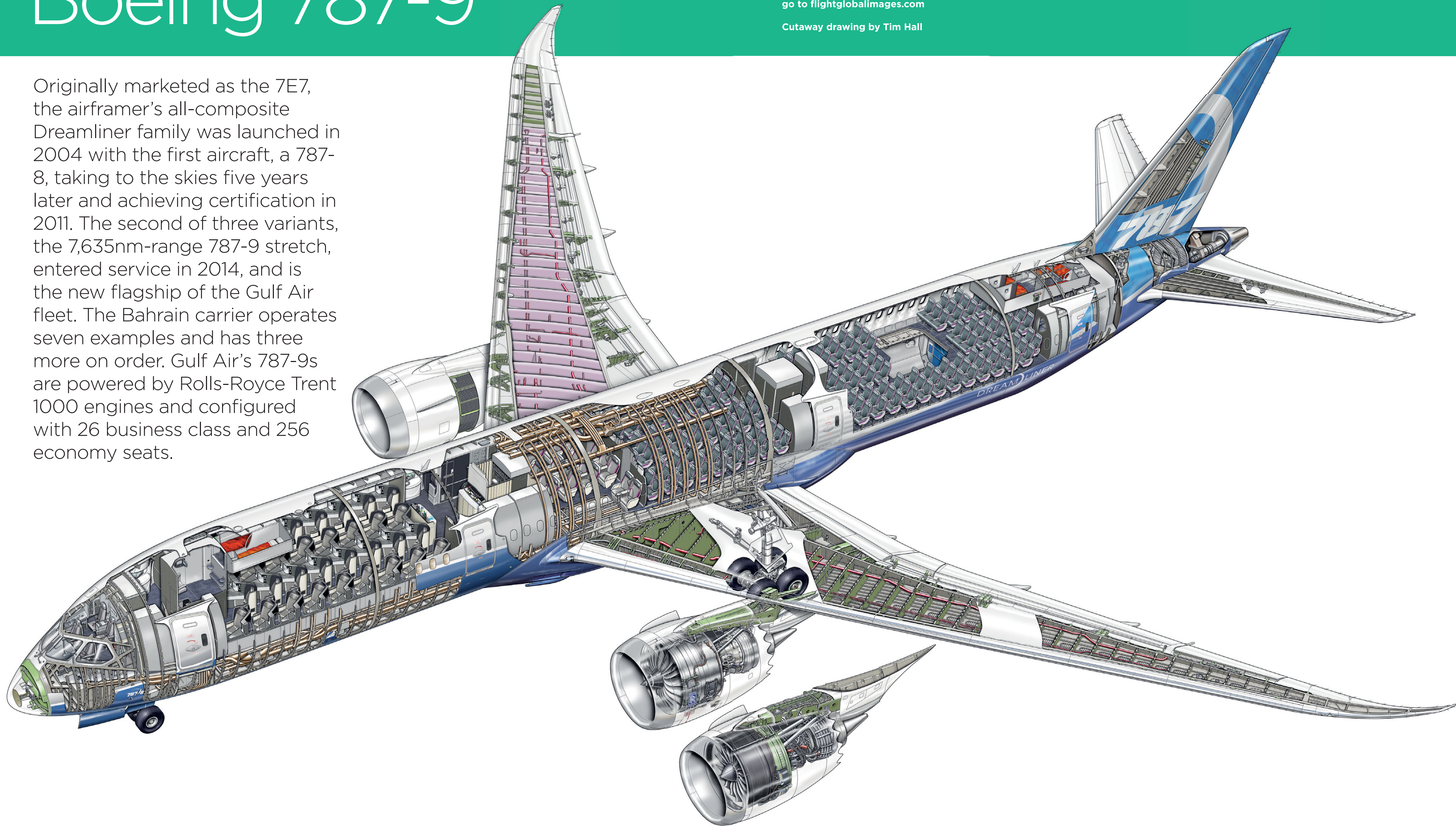
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Boeing 787-9

Originally marketed as the 7E7, the airframer's all-composite Dreamliner family was launched in 2004 with the first aircraft, a 787-8, taking to the skies five years later and achieving certification in 2011. The second of three variants, the 7,635nm-range 787-9 stretch, entered service in 2014, and is the new flagship of the Gulf Air fleet. The Bahrain carrier operates seven examples and has three more on order. Gulf Air's 787-9s are powered by Rolls-Royce Trent 1000 engines and configured with 26 business class and 256 economy seats.

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Cutaway drawing by Tim Hall



The inaugural World Defense Show took place in Riyadh, Saudi Arabia in March to acclaim. Its organisers are already making plans for an improved 2024 edition, as exhibition chief executive Andrew Pearcey explains

Right connections

Q Why are you participating at the Bahrain International Airshow this week, what are you hoping to achieve?

A World Defense Show is now looking at its second edition in February 2024 following its success earlier on this year.

We had an overwhelming response to the first edition. The overall World Defense Show proposition was very well received by the industry and show statistics and feedback received is testament to this. We created a fantastic show, an incredible bespoke venue and show features that enhanced this proposition further by providing a multitude of platforms on which our defence community could connect and do business.

Attending the Bahrain International Airshow gives us a great opportunity to meet with our partners, industry peers and clients to discuss opportunities, new show features and the overall show theme for the next edition. And of course, Bahrain is just next door, it's a great regional show and gives us an opportunity to meet with our neighbouring friends. Saudi Arabia continues to enjoy deep historical relations with Bahrain.

Our existing show features and content are currently undergoing enhancements to deliver bigger and better opportunities for all of our audiences. Our team are excited for what we have in store and 2024 is set to exceed expectations even further. We are looking forward to announcing our 2024 vision for the World Defense Show and its show features and content when we launch in February 2023.

Q Saudi Arabia plans to localize 50% of its military expenditure under national Vision 2030 objectives. How will World Defense Show support the realisation of this vision?

A Under Vision 2030, Saudi Arabia aims to grow its local defence industry into a key economic sector. Established in 2017, the General Authority for Military Industries (GAMI), Saudi Arabia's defence industry regulator, licensor, and enabler, has begun laying the foundations for a thriving local Saudi defence ecosystem supported by cost-effective and sustainable value chains.

The local defence industry's growth potential is still untapped, and as such the shift towards



World Defense Show

localisation represents a significant investment opportunity for the global defence community.

World Defense Show will offer defence primes, SMEs and start-ups the chance to explore opportunities in one of the largest and fastest growing markets in the Middle East. To help facilitate international stakeholders' entry into the market, the event will shed light on the new regulatory frameworks and financial incentives available to foreign companies.

Q What is World Defense Show offering to defence players looking to enter the Saudi market?

A World Defense Show offers unprecedented access to the Saudi defence ecosystem, and aims to advance cooperation and collaboration between national and international industry players.

The 2024 event will deliver a series of tailored networking programmes where investors, enterprising SMEs, and other industry stakeholders will have the opportunity to forge partnerships with the local defence ecosystem. One such networking initiative,



the Meet the KSA Government programme, will give participants privileged access to key decision-makers in the Kingdom's defence leadership. Meanwhile, the B2B connect programme will allow participants to network with international buyers and suppliers across the supply chain.

Q What is WDS doing to support start-ups?

A World Defense Show is dedicated to creating opportunities across the industry for start-ups, entrepreneurs and the visionaries of tomorrow that are pivotal to transforming the defence landscape. Showcasing this up-and-coming technology attracts investors and our event delivers a real platform to pitch ideas, products and strategies.

The 2024 edition will host an area called the Future of Defense Hub. It will feature research and development centres and universities who will be conceptualising the future. In addition, exhibitors within this hub will include a dedicated auditorium for presentations, panel discussion and funding pitching sessions for investors and investees.

We are excited to see this new show feature come to life. ▶

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Bahrain has big ambitions as a global crossroads for freight and e-commerce. It is enhancing its appeal to investors with serious projects for air and seaborne infrastructure

All go for cargo



Bahrain is one of four global hubs for DHL

Murdo Morrison

Boeing freighters sporting DHL's distinctive yellow and red paint scheme are an unmistakable and familiar sight at Bahrain International. The German logistics and parcels carrier - which has had a presence in the kingdom for 40 years - has helped Bahrain establish a reputation as one of the Middle East's key cargo crossroads.

Bahrain is enhancing its airfreight cluster credentials. The airport is also home to growing independent airline Texel, which has built a reputation as both a subcontractor for DHL and a specialist in its own right. It is expanding its fleet next year with two more aircraft. Meanwhile, another Bahraini company, MENA Aerospace, is establishing its own cargo venture.

In addition, the airport is building a cargo village, laying the foundation stone for the 25,000sq m (269,000sq ft) complex in June. It has signed a 10-year agreement with anchor tenant, DHL's rival FedEx Express, which will move into

its 9,000sq m part of the facility by January 2024. FedEx has its Middle East headquarters in Dubai, but has been present in Bahrain for 31 years.

The US company says its commitment to the Cargo Village will help Bahraini companies grow their business by improving their wider market access, and contribute to the kingdom's expanding logistics infrastructure. As well as Bahrain's strategic location, it says the country's "business-friendly environment", skilled workforce, and fast customs clearance makes it an attractive location.

The cargo village is part of the kingdom's strategy for the logistics sector as laid out in its economic recovery plan. That includes plans to link air cargo operations at Bahrain International with the nearby Khalifa bin Salman container port to make it easier for freight forwarders to ship heavy consignments from East Asia to Bahrain and then have them broken up for airfreight.

Bahrain says the development will give it the fastest multi-modal logistics hub in the region, with a two-hour turnaround time for goods arriving by sea to arriving at the

airport, thanks to a "state-of-the-art digital processing solution". The government says the Global Sea-Air Hub makes the most of the country's "strategic position" between Europe and Asia and its "proximity to regional markets".

It claims shippers who use the hub to combine sea and air freight could save 40% of the cost of using air alone while cutting in half the time it would take making the journey entirely by water. Sending Europe-bound consignments from Asia via the Gulf also, of course, also avoids the sometime bottleneck of the Suez Canal.

DHL Express has a fleet of 15 aircraft based at Bahrain International, nine of which - seven Boeing 767-300s and two 767-200s - are on its own local air operator's certificate. It wet-leases another six, three 737s from Texel, its fellow Bahraini operator, two Airbus A300-600s from its German sister airline, and a 767-200 owned by Poland's SkyTaxi.

Three more 767-300s will join the AOC next year, two of them as 767-200 replacements. "Our fleet has doubled in two years, and we are still outgrowing our aircraft," says

Richard Gale, vice-president aviation for DHL in Bahrain. "Six years ago, we were mostly intra-regional. Now we have bigger planes and longer routes - we do Bahrain to Hong Kong three times a day."

Bahrain is the smallest of four global DHL air hubs for DHL, the others being Cincinnati, Leipzig, and Hong Kong. However, its footprint in the kingdom is set to get bigger. Accompanying the fleet expansion will be a major revamp of its airside sorting facility, allowing DHL to process 4,500 consignments an hour, compared with 1,500 today.

The growth is unlikely to stop there. In the longer term, the company also wants to build a hangar, allowing it to carry out its own line maintenance.

"We outsource our MRO at the moment, but we would love to take that in-house," says Gale. While there are no concrete plans, he suspects there will be a need to grow the AOC further at some point, possibly with 777s.

Gale describes Bahrain as the "perfect" location for a hub. "Geographically, it is between Europe and Asia and also ideal for large e-commerce markets

such as Saudi and the UAE," he says. "Bahrainis are well educated, including in disciplines like IT, and aviation is getting stronger. From a regulatory point of view, the government is highly supportive, and we don't have weather problems."

As it did for every aviation operator, the pandemic presented challenges, not least with managing crews and other staff. However, in common with other freight providers, DHL was in constant demand, as locked-down households turned to e-commerce and there was a need to transport urgent consignments, including vaccines and other pharmaceuticals and medical equipment.

"Covid was chaos," admits Gale. "But while commercial collapsed, we still needed to deliver, so we kept flying, serving up to 20 key routes, even if our planes weren't full because a lot of the time it was essential supplies." In some cases, long-haul crews could not disembark because of local border controls. "It was complicated, but getting through it is one of the things I'm most proud of," he says.

DHL, which is the official logistics partner of the Bahrain International Airshow, is exhibiting one of its 767-300s on the static and taking part in the flying display. "It is a great opportunity for us every two years to showcase our brand and support what the government is doing," says Gale. "We also have a lot of our commercial customers in town so it is a chance to meet with them."

Texel is one of two other cargo operators with a Bahrain AOC. Set up in 2013, the carrier has marked two industry firsts. At the 2018 show, it debuted the Boeing 737-700 FlexCombi freighter from Pemco World Air Services. The converted airliner combines a cargo area with a flexible passenger cabin that be configured for 12 or 24 passengers. Texel added a second example last September.

In January this year, Texel took delivery of the Middle East's first converted 737-800 freighter. A second joined in September. In May, it placed orders for a further two for delivery in the first quarter of next year, which will take the company's fleet to seven - it operates another 737-300. Three of the aircraft - the 737-300 and the two -800s are on contract to DHL, flying scheduled services.

However, Texel is also keen to market its on-demand services, and has a major presence at the show, with one of the FlexCombi aircraft on the static. Post-pandemic, the company is keen to "relaunch our platform and re-engage with the world," says director George Chisholm, a British-New Zealander who has lived in Bahrain much of his life, and is the son of the firm's founder.

The FlexCombi gives Texel a key selling point, including in specialist sectors such as racehorse transport. "It's a product we believe in," says Chisholm. Texel can switch the configuration by moving the internal bulkhead in 48h. Like the two -800s, the FlexCombi is retrofitted with head-up display enhanced flight vision systems that "increase our window to operate", says Chisholm.

He says that, despite being

Chisholm: Texel is ready to engage with the world again



O'Brien is advisor for launch of MENA's cargo business



Hinedi: Still huge growth to be realized in e-commerce

a "family business that is quite conservative in what we do," the company made a decision to expand during the pandemic. This was partly due to the retirement of a slew of older commercial airliners that were available for conversion to freighters. "Covid and the dip in the values of feedstock enabled us to own our assets," says Chisholm.

The ACMI (aircraft, crew, maintenance and insurance) agreement with its neighbour DHL gives Texel the best of both worlds, he says, as it provides steady revenue for the scheduled services - Texel's narrowbodies being a more cost-effective option on short-haul feeder routes for the parcels giant - while allowing the company to market its own niche services in the region and beyond.

He says the support of the airport and the Bahrain authorities has been key to Texel's expansion, which he says will not stop with the additional aircraft. The business began doing its own base maintenance from its hangar during the pandemic and has plans to continue. Chisholm is also "open to" offering CMI services - like ACMI but using the customer's own aircraft.

However, the -800s, particularly the two new ones that will join the fleet next year, will be crucial to Texel furthering its ambitions, allowing it to broaden its destination network and raise payloads. The type carries up to 23.9t and has a range of just over 2,000nm, or four hours. This opens routes from Bahrain such as Istanbul, much of India, as well as eastern and north Africa, says Chisholm.

Texel's airport neighbour MENA, a longstanding Bahrain aviation company with its own AOC, has set up various ventures in the past, including business jet management operations. Its latest is a cargo carrier. Advised by veteran airfreight entrepreneur Michael O'Brien, the airline plans to lease two 737-800 converted freighters early next year, with four more joining the fleet in 2024 and 2025.

At the show yesterday, MENA announced a "strategic alliance" with Singapore-based Asia Cargo Network (ACN), under which ACN will base six of its freighters in Bahrain and the GCC. Two of them, a 737-800F and a 767-300F, will begin operations in the next two months, say the companies. The aircraft will join MENA's existing 737-300, and the venture will operate as MENA Cargo.

MENA launched its cargo offshoot last November with a former Southwest Airlines 737-300, converted by Pemco, transferring its AOC from a previous private jet management operation. Mohammed Juman, MENA's founder and managing director, said the "phenomenal growth" of e-commerce between Asia and the Middle East prompted the move.

FedEx Express shares that confidence in e-commerce's potential. Its vice-president of Middle East and Africa operations Taarek Hinedi says online commercial activity in the Middle East and North African will exceed \$28 billion in 2022. Growing incomes and internet penetration, and fewer border restrictions on trade means "there is a huge amount of growth yet to be realized", he believes.

FedEx estimates that global e-commerce, which makes up 16% of the total air cargo market, will double to be worth more than \$4.4 trillion by 2025, with small companies and consumers "maturing" in their attitude to buying over the internet, despite the post-pandemic return of bricks and mortar shopping.

Such a trend would be good news for all those backing Bahrain's investment in the cargo market. The kingdom's commitment to join the likes of other city-states such as Singapore and Dubai in becoming a vital staging post in the global flow of goods - from shipping containers to the smallest parcel - is a central theme of this week's show. ■



Texel's original FlexCombi, A9C-FLX

Flex appeal: inside Texel's versatile 737 freighter

Texel remains the sole operator of Pemco's 737-700 FlexCombi, a programme that the Tampa, Florida-based conversion house announced at the MRO Americas trade show in April 2017 with Bahrain-based Chisholm Enterprises – Texel's parent – as launch customer.

Work began on the first FlexCombi, a 13-year-old airframe, in the second quarter of 2017 with Chisholm starting operations in September 2020.

That came after the US Federal Aviation Administration issued its supplemental type certificate for the conversion to ATSG subsidiary Pemco in July of that year.

However, visitors to the previous Bahrain International Airshow in November 2018 did get a glimpse of the aircraft – registered A9C-FLX for “flexible” – on the static display. At the time, Texel had hoped to have clearance to operate the aircraft in 2019.

Pemco markets the FlexCombi as having three main configurations:

- a 24-seat cabin with a 74.7cb m (2,2640cb ft) cargo hold for

Cargo can be loaded at the front while passengers board



- up to 13,600kg (30,000lb) of payload in six pallet positions;
- a 12-seat cabin with 85cb m for cargo up to 15,900kg in seven pallet positions;
- full-freighter mode with a 95.4cb m hold, able to take 18,100kg in eight pallet positions.

However, Texel actually offers different permutations for the passenger cabin, creating seven variations. In addition to the above, there is an option with four business and 12 economy seats, with space for six pallets; eight business seats and

six pallets; six economy seats, two medevac beds and six pallets; or four business seats and seven pallets.

The big advantage of the FlexCombi, according to Texel, is that these adaptations can be made within 48 hours in the company's Bahrain airport hangar, according to customer requirements.

Texel added its second FlexCombi from Pemco in September 2021, with the registration A9C-SJW.

The company says that for passengers the experience of flying in the FlexCombi is not unlike a

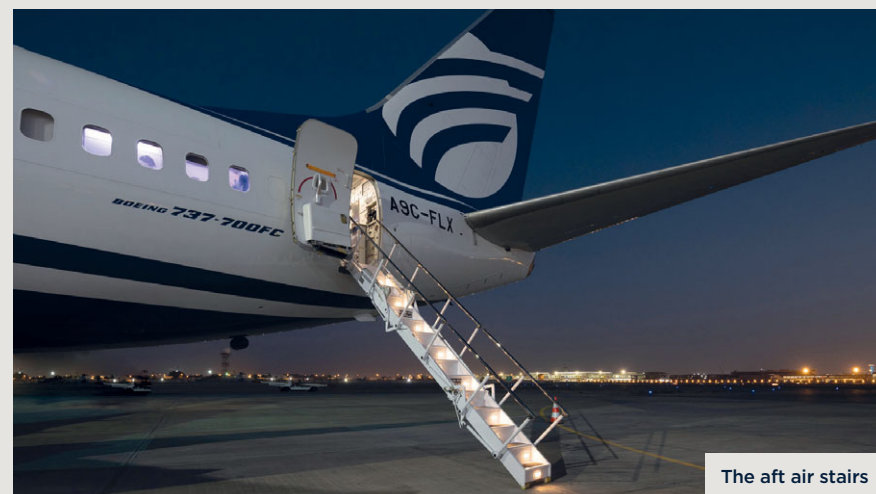
conventional 737-700, except that most of the interior is separated from the cargo area by means of a smoke-barrier moveable bulkhead.

Freight is loaded via a front cargo door, while the passengers board using an integrated air stair at the rear. There is a lavatory and full-service galley and the cabin is fitted with an in-flight entertainment system.

Pemco has been offering narrowbody freighter conversions since 2000 and has modified more than 350 aircraft under 70 STCs for around 60 customers.

Wilmington, Ohio-based ATSG is a listed corporation that offers outsourced cargo lift through various subsidiaries. It claims to be the world's largest operator of converted 767 freighter aircraft.

Visitors to the show this week have another chance to see one of Texel's FlexCombi 737s on the static. Both FlexCombis have been retrofitted with head-up displays, something Texel says improves the aircraft's window to operate in low visibility conditions.



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The world's biggest motor racing competition has been coming to Bahrain for almost two decades for what is now firmly established as a must-watch Grand Prix. It all began with a chance meeting on Concorde



A flypast by a Gulf Air jet shortly before the race starts is an annual tradition

Winning Formula

When Michael Schumacher crossed the line victorious at the inaugural Gulf Air Bahrain Grand Prix in 2004, it signalled the start of a love affair with Formula 1 for the country and for the region. For that first Grand Prix on "04-04-04" around the brand-new Bahrain International Circuit at Sakhir was the launch pad for Formula 1 in the Middle East. Along with the Bahrain International Airshow, the annual round of the Formula 1 World Championship is the event that really puts the Kingdom on the world map. Each year, almost 100,000 race-goers flock to the three-day event and several million more tune in to watch on TV from around the globe. And Bahrain's inaugural Grand Prix

was to start a trend for the Middle East, with an Abu Dhabi round becoming an annual fixture in 2009. Saudi Arabia entered the F1 fray in 2021 and Qatar is set to join the party from 2023 after being a late addition to the 2021 season amid the disruption caused to F1's racing calendar. That first Grand Prix in Bahrain in 2004 raised the bar for Formula 1 in terms of circuit design and facilities. The brand-new, 15-corner 5.4km circuit had been created by renowned F1 race-track designer Hermann Tilke. The German is behind many of the iconic circuit layouts around the globe and believes "tracks need to be planned with your heart, not just your brain". The layout was an instant hit with drivers and fans alike, as well as the then Formula 1 chief executive

Bernie Ecclestone, who said it "set the standards" that other circuits could aspire to and warned older, established tracks should "watch your back". Appropriately, the story behind the decision to bring Formula 1 to Bahrain involves the world's fastest airliner, Concorde. The supersonic transport was once a familiar sight in the Kingdom, being the inaugural destination for British Airways Concorde services in 1976. And the seeds for the idea of a race were sown after a chance meeting on board Concorde between Crown Prince Salman bin Hamad al Khalifa and former F1 World Champion Sir Jackie Stewart. When Bahrain signed the agreement to host a round of the FIA Formula 1 World Championship in September 2002, no racing track

existed in the kingdom. And it turned out that it had just 19 months to get one built. Construction began in the desert 30km south of the capital Manama at the site of a former camel farm in October 2002. Completion of the complex was initially scheduled to take two years, but Bahrain then agreed to a request from Ecclestone to bring forward the opening by six months. The \$150 million construction project, which involved up to 3,000 workers, was led by main contractor Cebarco-WCT. Gritstone imported from the UK was used for the track surface as its abrasive qualities ensured the asphalt had the sufficient level of grip. Over 1,100 palm trees were planted to bring some local character to the circuit, and the whole complex was completed in just 16 months.

The circuit can accommodate 45,000 spectators and features the iconic eight-story Sakhir Tower, overlooking the start/finish straight and the initial corners. Bearing a striking resemblance to an airport control tower, this building houses the administrative offices and some VIP lounges and forms a centrepiece of the paddock facilities. Ahead of the first Bahrain Grand Prix, the chairman of the circuit HE Sheikh Fawaz bin Mohammed al Khalifa said "Formula 1 is a driving force for the whole region". He described the track's creation as "a truly national effort", and the race as "a window through which the world can see and feel the true nature and personality of our Kingdom, from its superb history, culture and traditions to its forward-thinking attitude, its place as a centre to business and its hospitality to international visitors". Sheikh Fawaz described the track's creation as "a truly national effort", describing the race as "a window through which the world can see and feel the true nature and personality of our kingdom". Eddie Jordan, head of the team that bore his name, proclaimed that the new circuit was "breath-taking". Williams driver Ralf Schumacher described what the track was like for drivers, calling the right/left switchback through turns 4-7 "lightning quick" and said he particularly liked the "very long" start-finish straight. This was approached from a slow right-hander making it an ideal overtaking opportunity into the first turn. The start of the inaugural race on 4 April 2004 was preceded by the now traditional flypast of a Gulf Air jet (an Airbus A340-300 for the first race). Moments later the lights



Ferrari's Michael Schumacher celebrates on the Sakhir podium after winning the first Bahrain Grand Prix in April 2004

went out and Michael Schumacher launched his Ferrari F2004 into an unassailable lead, which contributed to him securing his seventh and final Drivers World Championship by the end of that season. Over almost two decades since then, the circuit has hosted 19 Formula 1 races - 18 Bahrain Grand Prix and one Sakhir Grand Prix (see table). There have been nine different winners, with Lewis Hamilton proving the most prolific, taking a total of five victories. Ferrari is the team with the highest tally of wins: seven - including victory at that historic first race and the most

recent one in March this year. As well as Formula 1, from 2006, the circuit hosted a Australian V8 Supercar race known as the Desert 400. The track also plays host to the likes of FIA endurance races, the GP2 Series and the Porsche Supercup. But the jewel in the crown since the circuit opened in 2004 has been the Formula 1 race. In 2006 Bahrain had the privilege of hosting the inaugural round of the season for the first time and has repeated this feat on several occasions since, including in 2022. Unfortunately, the 2011 race was cancelled due to

local unrest amid the Arab Spring uprisings around the region, with Crown Prince al Khalifa declaring: "We felt it was important for the country to focus on immediate issues of national interest." The circuit is designed with multiple layouts to allow different lap lengths and vary the number of corners. In 2009, the decision to run the Grand Prix on the longer "endurance" circuit proved unpopular, with many drivers complaining that the additional corners did little to improve overtaking at the track. In response, the organisers reverted to the



The start of the 2022 Bahrain Grand Prix, with Max Verstappen battling among the two Ferraris for the lead



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Bahrain Grand Prix winners

Year	Driver	Team
2004	Michael Schumacher	Ferrari
2005	Fernando Alonso	Renault
2006	Fernando Alonso	Renault
2007	Felipe Massa	Ferrari
2008	Felipe Massa	Ferrari
2009	Jenson Button	Brawn
2010	Fernando Alonso	Ferrari
2012	Sebastian Vettel	Red Bull
2013	Sebastian Vettel	Red Bull
2014	Lewis Hamilton	Mercedes
2015	Lewis Hamilton	Mercedes
2016	Nico Rosberg	Mercedes
2017	Sebastian Vettel	Ferrari
2018	Sebastian Vettel	Ferrari
2019	Lewis Hamilton	Mercedes
2020	Lewis Hamilton	Mercedes
2021	Lewis Hamilton	Mercedes
2022	Charles Leclerc	Ferrari

Sakhir Grand Prix

2020	Sergio Perez	Racing Point
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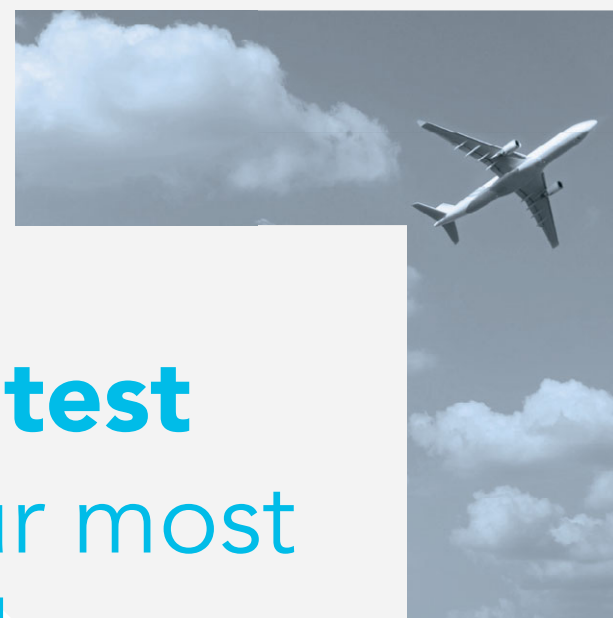
A meeting on Concorde between Crown Prince Salman bin Hamad al Khalifa and Formula 1's Jackie Stewart would lead to Bahrain becoming a regular fixture on the Formula 1 calendar

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traditional layout from the next season onwards.

In 2014 as the Bahrain GP celebrated its 10th anniversary, it switched to a more dramatic night race, with the Formula 1 cars running under almost 500 high-powered floodlights dispersed around the track. This format, which had first been introduced at Singapore Grand Prix in 2008, created an incredible visual spectacle both for trackside spectators and TV audiences alike. It also set the Bahrain race apart from the other local Grand Prix in Abu Dhabi, which begins at dusk and transitions to night-time.

The 2019 race was attended by a huge crowd of 97,000 fans over the three-day event, including 34,000 on race-day alone. But then the global pandemic in 2020 caused severe disruption to the calendar, with many races postponed and some cancelled altogether.

The Bahrain round of the championship ended up being rescheduled from early in the year to near the end. But the chaos that the

pandemic dealt to the race calendar ultimately created an unusual opportunity for Bahrain, which was asked to host two back-to-back race weekends but around different track layouts.

The first round – which was extremely memorable for the huge, fiery accident from which Haas driver Romain Grosjean escaped relatively unscathed – ran around the usual 5.4km layout. Round two, dubbed the “Sakhir Grand Prix”, was an 87-lap race around the shorter but faster “Outer Circuit”. This unusual track configuration for a Formula 1 race was effectively a rectangular layout with mainly right-hand corners. It also turned up an unexpected winner, with Sergio Perez taking his maiden victory, which was also the first win for the Racing Point team (which is now called Aston Martin).

Over the years, Bahrain has turned up some exciting and dramatic races. While the Grosjean fireball in 2020 was the most spectacular, there have been many epic tussles for victory. The 2014

race was particularly memorable, with Mercedes teammates Lewis Hamilton and Nico Rosberg going wheel-to-wheel for many laps in a battle for victory that ultimately went to the Briton.

Hamilton was involved in another race-long fight in 2021, this time with his key rival, Red Bull driver Max Verstappen. Hamilton again took the spoils by a margin of just 0.745s after 57 laps of racing. This year it was Charles Leclerc's turn to battle with Verstappen, with the Ferrari driver being ultimately victorious.

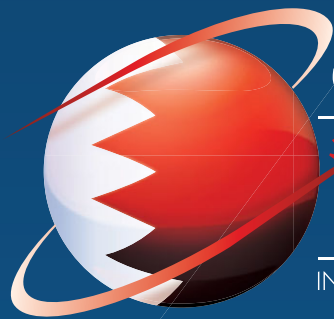
For 2022, Bahrain found itself once again hosting the season's opening round and will do so again next year, with the Grand Prix scheduled for 3-5 March. Gulf Air has been title sponsor of the race since day 1 and ahead of the 2022 event its chief executive, Capt Waleed Al Alawi, spoke of the airline's pride of being involved: “As the world begins to open up again, we are delighted to welcome fans from all over our network and

beyond once again to Bahrain as the race continues to prove to be a firm global favourite.”

Gulf Air's traditional pre-race air display is now operated by the airline's latest widebody, the Boeing 787-9, and is also a lower emission configuration as the aircraft is powered using a blend of sustainable aviation fuel provided by Neste.

The Sakhir circuit has now become established as the venue for the pre-season testing, a crucial three-day programme which allows the teams to finetune their aerodynamic configurations and suspension set-ups ahead of the first Grand Prix. It is usually during these tests that competitive pecking order for the season is first identified.

So, when the Formula 1 Circus regroups for the 2023 season early next year, all eyes around the world will be focused on Bahrain to see which drivers and teams are the leading contenders to take on Verstappen and Red Bull Racing in the battle for the Formula 1 championship. ▶



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