



◆ Anthony Hargrove, an assembler at the Collins Aerospace Aerostructures facility in Everett, Washington, works on an aircraft nacelle. Nacelles house and protect the engine, optimize air flows through it and manage a number of functions, including noise abatement, de-icing and braking.

▲ Malik Saleh (seated) and Emmanuel Derouillat, both senior systems engineers at the Collins Aerospace Engineering office in Bothell, Washington, work at a reconfigurable flight deck display test platform. The flight deck enables tests to be conducted in an environment similar to that of actual flight, allows several applications to be tested simultaneously, and flags and corrects problems before a system is delivered to the customer.

Collins Aerospace Systems

73,300

Employees

\$16.6B

Net sales

\$2.6B

Adjusted operating profit*

* See page 77 for additional information regarding non-GAAP financial measures.

Collins Aerospace is a leader in technologically advanced and intelligent solutions for the aerospace and defense industry. It is one of the largest aerospace systems companies in the world, created in 2018 through the combination of UTC Aerospace Systems and Rockwell Collins. The company designs, manufactures and services systems and components, and provides integrated solutions for commercial, military and space platforms.

During the year Collins Aerospace had a number of big wins that are now poised to deliver new and improved capabilities for next-generation platforms.

On the commercial side, Boeing announced that it would equip its next-generation 737MAX single-aisle jet with Collins Aerospace's Enhanced Flight Vision System and dual Head-up Guidance System as an option for operators. The EFVS allows operations in lower visibility conditions, and the HGS increases pilot and co-pilot safety. Airbus is undergoing a digital transformation using the FOMAX on-board connectivity solution, which enables airlines to collect

maintenance and performance data, and transmit it to ground-based operations in near real time. And Norwegian Air Shuttle is moving closer to a fully connected aircraft fleet with CabinConnect high-speed broadband connectivity solution. Collins Aerospace also was chosen by Dassault Aviation to provide an advanced nacelle system for its new Falcon 6X business jet.

On the military side, Collins Aerospace was selected by Boeing to provide its ACES 5 ejection seat and fully integrated landing gear system for the U.S. Air Force's new T-X jet trainer. And it will develop the main electric power generation system for South Korea's KF-X fighter jet, which will include the latest state-of-the-art variable speed constant frequency generator.

In 2018 Collins Aerospace also enjoyed significant demand for its wheel and brake systems. More than 35 airlines selected this equipment, representing commitments totaling more than \$500 million. The company also announced the development of a next-generation vehicle management computer that will enable fly-by-wire and autonomous flight for civil and military aircraft.



▲ Pratt & Whitney's F135 engine powers all three variants of the F-35 Lightning II, the most advanced military aircraft in the world. During the year, Pratt & Whitney was awarded a U.S. Department of Defense contract for 135 F135 engines. Here, Jose Garcia, business acquisition manager for the Joint Strike Fighter program, admires an engine at Pratt & Whitney's Middletown Engine Center in Connecticut.

▶ Demand continues to grow for Pratt & Whitney's Geared Turbofan engine. The company not only is ramping up production but also is expanding its maintenance, repair and overhaul facilities to serve customers globally. Here Kaitlyn Sooklal works on a GTF engine at a Pratt & Whitney MRO facility in West Palm Beach, Florida.

Pratt & Whitney

Pratt & Whitney is a world leader in the design, manufacture and service of aircraft engines and auxiliary power systems, and has been revolutionizing modern flight for almost a century.

The Geared Turbofan engine is a game-changer and in a league of its own, with 16 percent better fuel efficiency and up to a 75 percent smaller noise footprint than the previous generation of engines.

In 2018 Pratt & Whitney celebrated the entry into service of Embraer's E190-E2, powered exclusively by the GTF. Thirteen airlines celebrated their first GTF-powered aircraft delivery, including Delta Air Lines' acceptance of its first A220 aircraft, and 12 airlines announced new GTF orders. With demand growing for the GTF, Pratt & Whitney is taking steps to ensure that customers have not only a world-class engine but also world-class service. The company is expanding its global

network of maintenance, repair and overhaul facilities, and expects to have eight in place by 2020.

Demand for business jets also is on the upswing, bringing new opportunities to Pratt & Whitney. The PW800 engine entered service with the introduction of the Gulfstream G500 ultra-long-range jet, and the PW812D engine was selected for the Falcon 6X business jet that Dassault Aviation is developing.

Pratt & Whitney continues to power a vast range of military aircraft. During the year, Pratt & Whitney was awarded a U.S. Department of Defense contract for 135 F135 engines. The F135 powers all three variants of the F-35 Lightning II, the world's most advanced fighter jet. More recently, Pratt & Whitney celebrated the first acceptance and delivery of the PW4062-powered KC-46 tanker to the U.S. Air Force.

41,600

Employees

\$19.4B

Net sales

\$1.6B

Adjusted operating profit*

* See page 77 for additional information regarding non-GAAP financial measures.



- ▶ Carrier brings a high level of connectivity to its HVAC systems, enabling building owners and facility managers, like Carrier's Alex Garcia, to make informed decisions relative to comfort demands, service and maintenance requirements, and ongoing performance.
- ▶ Angie Gomez, general manager at Edwards, works with on-site security in Palm Beach Gardens, Florida, to utilize Carrier's suite of products and solutions for intelligent buildings across HVAC, security, video, access control and fire detection and suppression.

Carrier

54,400

Employees

\$18.9B

Net sales

\$3.1B

Adjusted operating profit*

* See page 77 for additional information regarding non-GAAP financial measures.

Carrier is a leading global provider of innovative HVAC, refrigeration, fire, security and building automation technologies. The company's portfolio includes industry-leading brands such as Carrier, Chubb, Kidde, Edwards, LenelS2 and Automated Logic.

Carrier's businesses enable modern life, delivering efficiency, safety, security, comfort, productivity and sustainability across a wide range of residential, commercial and industrial applications. Through accelerated innovation, the company has released more than 100 new products for the fourth consecutive year.

In 2018 Carrier moved into the Center for Intelligent Buildings, its new global headquarters in Palm Beach Gardens, Florida. Designed to LEED Platinum standards, this first-of-its-kind building showcases Carrier's vast portfolio of technologies and demonstrates how they can be integrated to improve the occupant experience.

Carrier's ductless business introduced an industry-defining innovation with a new single zone ductless system. At 42 SEER, there's nothing more efficient in North America. The system features built-in Wi-Fi that offers

control from virtually anywhere, plus innovative smart humidity and occupancy sensors that provide maximum home comfort.

Automated Logic developed the new OptiFlex virtual integrator platform that enables building operators to monitor up to 50,000 data points from various building systems, subsystems and devices using a single computer server. The winner of the AHR Expo Innovation award in the building automation category, OptiFlex delivers data that can be turned into actionable insights to improve overall building performance.

Through the acquisition of S2 Security, Carrier formed LenelS2, a global leader in commercial and enterprise security systems. LenelS2 provides scalable, cutting-edge access control and video solutions to small- and mid-size companies.

Carrier Transicold celebrated the 50th anniversary of the invention of the front-wall refrigeration unit for marine shipping that revolutionized the global transport of perishable and frozen goods. It also inked major sales to Evergreen Line, T.S. Lines Ltd. of Taiwan and MSC Mediterranean Shipping Company.



▲ Jeneviene Ferrante, an apprentice in Otis' San Francisco field operations, is part of a global team of 33,000 dedicated professionals who maintain 2 million elevators, escalators and moving walkways in the Otis service portfolio around the world.

▶ In 2018 Otis won the contract to supply 54 SkyRise high-speed elevators and other equipment for The Spiral, a 65-story office tower going up in New York City's Hudson Yards district. Four Otis SkyBuild self-climbing elevators will be used to help speed construction during the project, which is due for completion in 2022.

Otis

Otis is the world's leading maker and maintainer of elevators, escalators and moving walkways.

Over the past 165 years, Otis has transformed cities, changed how people live and work, and revolutionized architecture itself. Otis is once again transforming the industry it created, harnessing 21st-century technologies to enrich the experience of the 2 billion passengers Otis moves each day, all while delivering a higher level of personalized service to its customers.

The new Otis ONE digital service platform will minimize equipment downtime and keep people on the move. Otis ONE sensors collect real-time performance data that cloud-based algorithms analyze to predict and prevent shutdowns. It is called predictive maintenance, and it redefines the very nature of service.

In 2018 Otis also launched Signature Service, its new global service brand that combines the latest digital technology with enhanced processes and the expertise of 33,000 Otis mechanics in the field.

Otis' revolutionary SkyBuild self-climbing elevator is helping to speed construction at some of the world's most iconic projects underway in 2018, including Resorts World Las Vegas, The Spiral at New York City's Hudson Yards and London's Twentytwo. The SkyBuild elevator gets crews and materials where they need to be quickly and safely — without an external hoist and without exposure to the weather.

The internal system rises in one-floor increments as a building is going up and operates at speeds three times faster than a conventional external hoist. The result: Each crew member can get an additional 30 to 60 minutes of productive time on the job each day. Once construction is complete, each SkyBuild system quickly converts to a permanent SkyRise elevator, Otis' most advanced high-rise system to date.

As urbanization accelerates, China is rapidly building out its infrastructure. Otis is part of that effort. In 2018 the company won contracts to supply more than 2,500 elevators and escalators for metro, rail and airport projects in 11 cities.

68,500

Employees

\$12.9B

Net sales

\$2.0B

Adjusted operating profit*

* See page 77 for additional information regarding non-GAAP financial measures.