For over 85 years, Pratt & Whitney has led industry change with products, services and technologies that have defined the aero-power Original Equipment Manufacturer (OEM) and Maintenance Repair & Overhaul (MRO) industries. As the world’s only OEMRO® provider of engines, parts and services, Pratt & Whitney’s well-balanced portfolio extends from engines for very light jets to engines for jumbo jets, from land-based industrial gas turbines to space shuttle and rocket engines, from engines for fifth-generation fighters to our new PurePower® engine family for the next generation of commercial aircraft. It also includes part development and full-service maintenance, repair and overhaul support for Pratt & Whitney products and competitor products.

Pratt & Whitney. It's in our power.”
Pratt & Whitney provides dependable power to hundreds of airlines and operators every day. Our fleet of commercial engines has logged more than 1 billion hours of flight powering the single-aisle and wide-body aircraft that fly both passengers and cargo around the world.

With a focus on fuel efficiency and reliability, our engines meet all current and projected environmental regulations for noise and emissions. We continue to invest in our current engines, developing new technologies to improve fuel efficiency, performance and environmental impact. Our new PurePower® family of engines for the next generation of commercial aircraft is setting higher standards for fuel efficiency, environmental emissions, engine noise and operating costs.

Pratt & Whitney’s Global Service Partners network provides commercial engine customers with a broad range of maintenance, repair and overhaul offerings; customized maintenance management programs; and a complete range of line maintenance capabilities. These are available for all Pratt & Whitney products, as well as products offered by General Electric, Rolls-Royce and CFMI.
**JT9D Engine**

Pratt & Whitney's JT9D engine opened a new era in commercial aviation: the high-bypass-ratio engine to power wide-body aircraft. As Pratt & Whitney’s first high-bypass-ratio turbofan, it introduced many advanced technologies in the areas of structures, aerodynamics and materials to maximize fuel efficiency and component durability. For JT9D-7R4 twinjet installations, the engines are approved for 180-minute ETOPS.

**JT8D-200 Engine**

JT8D-200 engines are the exclusive power for MD-80 twinjets and re-engined 727 trijets, or Super 27s—a program offered by Pratt & Whitney and Goodrich Aerostructures Group. Since entering service in 1974, more than 2,900 engines have been produced in five models, covering a thrust range of 19,250 to 21,700 pounds. In addition, the -200 engines have built on the standard JT8D engine’s excellent reputation for high reliability and low maintenance costs. Improvement programs continue to keep the JT8D-200 fleet operating effectively for today’s airlines.

**PW2000 Engine**

Covering the mid-thrust range from 37,250 to 43,000 pounds, the PW2000 engine powers all models of the twin-engine Boeing 757, and it is the exclusive power as the F117 engine for the four-engine U.S. Air Force C-17 Globemaster III military transport. The PW2000 engine entered revenue service in 1984 as the first commercial engine equipped with FADEC (Full-Authority Digital Electronic Control) technology.

In 1994, a technologically upgraded PW2000 engine, the Reduced Temperature Configuration (RTC), was certified with a number of durability and reliability enhancements. The PW2000 engine is approved for 180-minute ETOPS (Extended-range Twin-engine Operations) and meets all current and proposed noise and emissions regulations.

The PW2000 engine is the power of choice for the Boeing 757, and the F117 engine is the exclusive power for the USAF C-17 Globemaster III.
PW4000
94-inch Fan Engine
The 94-inch fan model is the first in the PW4000 high-thrust engine family. This engine series consists of nine models and spans the 52,000- to 62,000-pound-thrust range. Since its introduction in 1987, more than 2,000 engines have been produced for more than 75 operators worldwide. More than half of these customers use the engine to fly 180-minute ETOPS routes. PW4000 94-inch fan engines feature several advanced, service-proven technologies, such as single-crystal superalloy materials and high-temperature ceramic coatings. Options include a low-emissions TALON™ (Technology for Advanced Low NOx) combustor and a noise-reduction upgrade.

PW4000
100-inch Fan Engine
The first PW4000 growth model, certified at 64,000 to 68,000 pounds thrust, was designed specifically for the A330 twinjet. It entered service in 1994, already approved for early ETOPS.

Some technological features are its Kevlar® containment case, Floatwall combustor with segmented linear panels and advanced FADEC system. For A330 aircraft, the PW4000 100-inch fan engine is the in-service experience leader with the lowest environmental emissions in its class.

Pratt & Whitney’s Advantage70™ engine can improve hot and high performance for the A330, as well as lower fuel consumption by one percent and reduce maintenance costs by 10 to 15 percent.
PW4000
112-inch Fan Engine

The PW4000 112-inch fan model was the launch engine for Boeing’s 777 twinjet. Certificated models in this engine series cover a thrust range from 74,000 to 90,000 pounds. All models were approved for 180-minute ETOPS prior to service launch, an industry first. Now, ETOPS approval has been increased to 207 minutes, demonstrating the high level of reliability operators expect from the 112-inch fan engine.

Wide-chord, hollow and shroudless fan blades have been incorporated in the PW4000 112-inch fan engine series. Other advanced technology features include lightweight Kevlar® fan blade containment, a low-emissions combustor and aggressive, high-work compressor aerodynamics.

PW6000 Engine

The PW6000 engine, with a thrust range of 18,000 to 24,000 pounds, is Pratt & Whitney’s newest large commercial engine product-line entry. Targeted for new 100-passenger-sized aircraft, it features a number of new technologies enabling low operational and acquisition costs.

A prominent design feature is the overall reduction in compressor and turbine stages that contributes substantially to lower maintenance and ownership costs. The engine’s core, for example, features a six-stage high-pressure compressor driven by a single-stage high-pressure turbine. The engine’s maintainability is further enhanced with 15-minute removal and replacement of line replaceable units. The PW6000 engine achieved certification on the A318 in December 2005 and is 180-minute ETOPS approved. The engine entered service in May 2007.

V2500® Engine

The V2500 engine is designed and manufactured by International Aero Engines (IAE), a global partnership of aerospace leaders including Pratt & Whitney, Rolls-Royce, Japanese Aero Engine Corporation and MTU Aero Engines. The V2500 engine offers advantages in technical excellence and manufacturing experience, with a reputation of being the preferred engine choice for the A320 family.

V2500 engines offer the most advanced technologies in their 22,000- to 33,000-pound-thrust range and enhance operating and environmental performance. The IAE V2500Select® engine program offers significant improvements in fuel burn and maintenance costs.
GP7200 Engine

Engine Alliance LLC, a joint company of Pratt & Whitney and General Electric, produces the GP7200 turbofan engine, designed specifically for the Airbus A380. The GP7200 engine covers the 70,000- to 81,500-pound-thrust range and incorporates many proven technologies currently operating in Pratt & Whitney and GE commercial engines. This integration of technological advances and operating experience gives the GP7200 engine competitive benefits in fuel economy, reliability and environmental performance. The GP7200 engine was certified in December 2005 and entered service in August 2008.

Pratt & Whitney
PurePower® Engines: This Changes Everything™

Pratt & Whitney is leading the industry with game-changing technology for the next generation of commercial aircraft.

Initially referred to as the Geared Turbofan™ engine, Pratt & Whitney’s PurePower® PW1000G engine family will deliver double-digit improvements in:

• Fuel burn
• Environmental emissions
• Engine noise
• Operating costs

In February 2009, Pratt & Whitney announced the successfully completed PurePower PW1000G demonstrator engine program, which accumulated 406 hours of testing including 120 hours in flight. The PurePower PW1000G engine has been selected as exclusive power for the Bombardier CSeries aircraft and the Mitsubishi Regional Jet, and it has been selected to power the Airbus A320neo (new engine option) and Russia’s Irkut MC-21 aircraft. In 2010, Pratt & Whitney began full engine testing. The engine is the first of an extensive engine validation and certification program that will run over the next 24 months with engine certification and aircraft first flight scheduled for 2012. The PurePower engine is scheduled to enter service on the Bombardier CSeries in 2013.

Military Engines

Accelerates to supersonic speeds in seconds. Operation at metal-searing temperatures, with uncompromising reliability. These are some of the performance demands placed on Pratt & Whitney engines that power the world’s most technologically sophisticated weapon systems—the F-22 Raptor and the F-35 Lightning II—today and into the future.

Pratt & Whitney’s F100-series engines are the workhorse for the U.S. Air Force’s (USAF) F-15 Eagle and F-16 Fighting Falcon and air forces in 22 nations. More than 7,100 engines have been built. The latest evolution, the F100-PW-229 EEP, is now in production.

Our F117 turbofan engines are the exclusive propulsion system for the C-17 Globemaster III transport, which holds 33 world records. The JT8D-219 engine was chosen to re-engine the USAF’s Joint Surveillance and Target Attack Radar System (STARS) aircraft and has successfully demonstrated its capability in flight. Our unmatched experience in stealth and integration position Pratt & Whitney to be a leader in the emerging unmanned air vehicle market.

Our military products and customers worldwide benefit from a proven and comprehensive range of services to meet all maintenance, readiness and product support requirements.
F100-PW-220 Engine

In service since 1984, the F100-PW-220 engine is the successor to the F100-PW-100 engine and -200 models. It produces more than 23,000 pounds of thrust in full augmentation and powers the twin-engine F-15 Eagle and single-engine F-16 Fighting Falcon. The F100-PW-220 engine also powers the majority of F-15s and F-16s in the international market. The engine was the first fighter engine with Digital Electronic Engine Control (DEEC) technology incorporating real-time engine monitoring. The F100-PW-220 engine’s reliability, durability and modular design maximize operational readiness and provide the F100-PW-220 an exceptional safety record.

JT8D-219 Engine

The JT8D-219 model is a technologically enhanced version of the standard JT8D engine that has been chosen to re-engine the USAF’s B707 E-8C Joint STARS aircraft. When compared to earlier JT3D power, the JT8D-219 engine offers significant improvements in fuel economy and range and, in most cases, more available thrust. Conversion requires no structural modifications to the wing or other complicated integration changes to either the engine or aircraft.

Significant noise reduction is achieved on JSTARS aircraft with JT8D-219 engines. JT8D-219 powered B707 aircraft meet current Stage 3 noise requirements when rated at 19,000 pounds of thrust. Exhaust emissions are appreciably lower than the JT3D.

F100-PW-229 Engine

In service since 1989, the F100-PW-229 engine has the highest thrust-to-weight ratio of any fighter engine, producing 29,100 pounds of thrust. The engine is the most technologically advanced model in the F100 engine family. It utilizes advanced technology from the Pratt & Whitney F119-PW-100 engine, and it is the exclusive power for the USAF’s F-15E. The F100-PW-229 engine is the successor to the F100-PW-100 engine family. It utilizes advanced technology and the F-35 Lightning II F135 propulsion and lift system. The F100-PW-229 EEP significantly increases the life capability of the turbine hardware by incorporating these low-risk technologies developed and matured for the fifth-generation fighter engines—Pratt & Whitney’s F119 and F135 engines. The EEP is the only fighter engine qualified to a 6000-cycle depot interval. This will result in significantly reduced costs of ownership as well as a reduction in maintenance infrastructure requirements. No other production fighter engine manufacturer in the world has this unique opportunity for incorporating these proven advanced technologies into its near-term products.
F135 Engine

Pratt & Whitney’s most powerful fighter engine ever built—the F135—will power all three variants of the new, advanced, single-engine tactical fighter, the F-35 Lightning II developed by Lockheed Martin. The F-35 includes a conventional take-off and landing (CTOL) variant, carrier variant (CV) and short take-off and vertical landing (STOVL) variant. The F135 engine has successfully completed numerous milestones, including initial service release for CTOL/CV and STOVL variants, first production deliveries of CTOL and STOVL variants and powered the first STOVL vertical landing. The F135 continues to successfully power Lockheed Martin’s F-35 flight test program. The F135 engine is an evolution of the technologically advanced F119 engine that powers the U.S. Air Force’s F-22 Raptor. In the 40,000-pound-thrust class, it adopts the F119’s core—a high-performing six-stage compressor driven by a single-stage turbine—with a new low-pressure spool, providing enhanced maturity and safety for the F135.
F117-PW-100 Engine
The F117-PW-100 engine is a military version of the PW2000 commercial engine. It is the power plant for the U.S. Air Force’s C-17 Globemaster III, a four-engine transport that received initial operating capability status in 1995. With four engines producing 40,400 pounds of thrust each, the C-17 can carry a maximum payload of 160,600 pounds. Unique to the C-17, the F117 engines are equipped with a directed-flow thrust reverser capable of being deployed in flight. On the ground, the thrust reverser can back a fully loaded aircraft up a two-degree slope.

F119-PW-100 Engine
Pratt & Whitney is the exclusive designer and manufacturer of the only operationally fielded fifth-generation fighter propulsion system in production today—the F119 turbofan engine—that powers the U.S. Air Force’s F-22 Raptor. The F119 propulsion system supports the Raptor’s ability to achieve its objectives through its maturity, affordability and performance. In the 35,000-pound-thrust class, two F119 engines are capable of sustaining F-22 supersonic flight for extended periods without afterburner operation, giving the F-22 exceptional combat performance without compromising mission range. The F119 engine combines stealth technologies and vectored thrust with high thrust-to-weight performance to provide unprecedented maneuverability and survivability. The Raptor entered operational service in December 2005, and the U.S. Air Force declared full operational capability in December 2007.

Photo courtesy of Bill Fauth.
Pratt & Whitney Rocketdyne (PWR) has been a global leader in rocket propulsion for more than a half-century. From America’s first orbiting satellite to the space shuttle to probes that have traveled beyond the solar system, rocket engines from Pratt & Whitney Rocketdyne have provided the power behind 80 percent of all American launches into space. Today, that expertise and leadership continue to set the standard and the pace for the American space program, even as we work toward a return to the moon and future journeys to Mars.
Launch Vehicle Propulsion

Space Shuttle Main Engine
The Space Shuttle Main Engine (SSME) is the most reliable and highly tested large rocket engine ever built, with 100 percent flight success and more than 1 million seconds of firing.

The SSME is a reusable, staged-combustion-cycle engine that uses a mixture of liquid oxygen and liquid hydrogen. It can attain a maximum thrust level (in vacuum) of 512,300 pounds, which is equivalent to greater than 12 million horsepower. The regeneratively cooled engine also features high-performance fuel and oxidizer turbo-pumps that develop 69,000 horsepower and 25,000 horsepower, respectively.

Ultra-high-pressure operation of the pumps and combustion chamber allows expansion of all hot gases through a high-area-ratio exhaust nozzle to achieve efficiencies never previously attained in a production rocket engine. These advantages allow heavier payloads to be carried without increasing the launch vehicle size.

RS-68 Propulsion System
The RS-68 engine is the first new, large, liquid-fueled rocket engine to be created in a generation. In contrast to its predecessors, the RS-68 engine was developed with low cost as the primary criterion. The result has been an 80 percent reduction in parts as compared to its counterparts, as well as lower production and operational costs.

The engine employs a gas-generator cycle, is throttleable and burns liquid hydrogen and liquid oxygen. At sea level, it produces 650,000 pounds of thrust. The RS-68 engine was specifically designed to provide first-stage boost for United Launch Alliance’s Delta IV vehicle. In the Delta IV’s medium configuration, a single RS-68 is used, while on the “heavy” configuration—with three common booster cores—three are used.

RS-27A Engine
With a history of more than three decades of operation, the RS-27A engine is one of the bona fide workhorses of the American space program. To date, it has powered more than 200 missions with United Launch Alliance’s Delta II vehicle with 100 percent success.

The engine employs a gas-generator cycle and burns kerosene and liquid oxygen. At sea level, the regeneratively cooled RS-27A engine produces 200,000 pounds of thrust.
RD-180
Propulsion Engine
PWR, through an agreement with RD Amross, offers large liquid-fueled booster engines to meet U.S. booster propulsion needs.

The RD-180 engine is a large liquid-oxygen-and kerosene-fueled booster engine that generates nearly 1 million pounds of thrust.

The RD-180 engine powers the booster stage of United Launch Alliance's Atlas V launch vehicles. It has 100 percent mission success.

Precision handwork is done on elements of a PWR propulsion system.

The RD-180 engine packs nearly 1 million pounds of thrust.
Advanced Propulsion

Hypersonic Propulsion Technology

Pratt & Whitney Rocketdyne has the leading capabilities in hypersonic propulsion technology from ramjets to scramjets and other propulsion systems. The X-51 Scramjet Engine Demonstrator—Waverider is poised to be the first flight demonstration of hypersonic propulsion for practical use and sets the foundation for several hypersonic applications including access to space, reconnaissance-strike and global reach. The robust Scramjet continues to provide critical advanced propulsion technologies. Hypersonic engines offer significant performance improvements compared to existing rocket technologies. New materials, cutting-edge design, fuel thermal management and manufacturing processes have been developed to achieve these characteristics.

Propulsion for the Future

Pratt & Whitney Rocketdyne has powered nearly all our U.S. astronauts to space and returned them safely. Working with NASA to prepare for bold new endeavors beyond low-Earth orbit, PWR’s J-2X engine is under development to meet that need. There may be future uses in new heavy-lift rockets for a variant of the RS-68 or the current SSME. Pratt & Whitney Rocketdyne is positioned to power our nation’s future rockets as we move beyond the space shuttle to exploring the cosmos.

Missile Defense Propulsion

Pratt & Whitney Rocketdyne is providing reliable, lightweight propulsion in support of the Terminal High Altitude Area Defense (THAAD) and the High Performance Liquid Upper Stage (HPLUS) programs. THAAD is an upper-tier-theater ballistic missile defense system that will engage short- and medium-range-theater ballistic missiles. Development of THAAD began in 1992, and the system is currently our nation’s most mature upper-tier program, with initial operational capability in 2009. HPLUS is being developed for application in the early intercept ascent phase interceptor system envisioned to be operational in 2020.

Pratt & Whitney Rocketdyne is leveraging its experience with small propulsion systems to develop and produce the Divert and Attitude Control System (DACS) for THAAD’s Kinetic Kill Vehicle (KKV). THAAD is envisioned to protect our country and deployed troops from ballistic missiles.

Pratt & Whitney Rocketdyne is providing upper stage propulsion systems that will provide enhanced interceptor performance and protection from ballistic missile threats.
Power is spelled “Pratt & Whitney Canada” for thousands of operators who fly aircraft in the business, general, helicopter and regional aviation markets around the world. Throughout its rich history, Pratt & Whitney Canada (P&WC) has set new standards in performance, fuel consumption, emissions and quiet operations, driven by its passion to innovate.

Pratt & Whitney Canada is at the forefront of the new and exciting light jet market with its revolutionary PW600 family, while the PW300 and PW500 series have fast become leaders in the corporate jet market. The new-generation PW210 engine family is the best value today for singles and intermediate-to-medium twin helicopters in the 1,000-shaft horsepower class, with the highest power-to-weight ratio and lowest fuel burn in its class. Pratt & Whitney Canada has also launched its new and innovative 10,000-pound thrust class engine family for the new generation of large, long-range corporate and regional jets: the PurePower® PW800 engine.

Pratt & Whitney Canada is committed to providing its customers with world-class support that surpasses expectations across all its markets. This commitment is backed by one of the most extensive support networks in the industry, including over 30 company-owned and designated service facilities, a new Customer First Centre for expert and rapid assistance and an expanded parts distribution network to deliver an enhanced level of unmatched frontline service.

With field support representatives on all continents, mobile repair teams available around the clock, and the largest pool of P&WC rental and exchange engines in the industry, P&WC’s goal is to go the extra mile to keep its customers flying.

Pratt & Whitney Canada
PT6
Turboprop Engine Family
More than a legend, the PT6 turboprop engine family is a powerhouse that offers unmatched performance, reliability and value in a wide range of applications. From flying into Antarctic darkness at 75°F below zero to supporting environmental efforts in reforestation programs, the dependability and versatility of the PT6 family continues to earn the highest respect from pilots worldwide. Ranging in power from 500 shp to more than 2,000 shp, PT6 turboprop engines offer unsurpassed flexibility and capability for a variety of applications.

PW100
Engine Family
The PW100 turboprop engine is the proven airline benchmark for low fuel consumption. PW100-powered airline turboprops consume 25 to 40 percent less fuel and produce up to 50 percent lower CO₂ emissions than similar-sized regional jets. As a result, many airlines are renewing their fleets with PW100-powered aircraft. The PW100 engine family (PW118 to PW150) offers a power range of 1,800 to over 5,000 shp.

JT15D
Engine Family
The JT15D turbofan engine family is P&WC’s first turbofan engine and continues to enjoy success today as new models are introduced, embodying the latest advanced technologies. Since its introduction in the 1970s, the JT15D family has expanded to power a wide range of business aviation and government applications. The JT15D engine family offers a power range of 2,200 to 3,400 pounds of thrust.
PW300
Engine Family
Designed for mid-sized to large business jets and the high expectations of the fractional ownership business jet market, the PW300 engine family combines high performance with excellent operating economics.

The PW300 series is P&WC’s first total integrated propulsion system including engine, nacelle and thrust reverser and is built with the latest technologies to deliver highly dependable, fuel-efficient power for its long-range business jet applications. The PW300 turbofan engine family ranges from 4,700 to 7,000 pounds of thrust.

PW500
Engine Family
The PW500 turbofan engine family incorporates the latest advanced technologies in the drive to exceed our customers’ expectations in performance, reliability, durability, fuel consumption and environmental friendliness. It is designed for light to mid-sized business jets from engine to fully integrated power plants and offers a power range of 2,900 to 4,500 pounds of thrust.

PW600
Engine Family
A major catalyst in shaping a new era of business aviation, the PW600 engine is at the heart of the light jet market. The PW600 turbofan engine family, in the 900 to 3,000 pounds thrust class, is specially designed for point-to-point travel in a new generation of light jets. Compact and light weight, the PW600 is fuel efficient and clean with excellent operating economics.

PT6
Turboshaft Engine Family
The PT6 family of turboshaft engines, led by the famous PT6T Twin-Pac® engine, has set industry standards for reliability and durability since its introduction in the 1960s. The introduction of the PT6 turboshaft family created the foundation for P&WC’s success in the helicopter market, with a heritage that is second to none. The PT6 turboshaft family offers a power range of 900 to 2,000 shp. PT6 turboshaft engines power an impressive product line of intermediate-class helicopters.
PurePower® PW800

Engine Family

The new-generation PurePower® PW800 engine family raises the bar on performance and economics by taking advantage of the latest material, aerodynamic and design technologies. The engine incorporates advanced fan, compressor, turbine technologies and the low-emissions TALON™ ‘X’ combustion system for exceptional fuel consumption, future thrust-growth capability and improved environmental performance.
PW100TS
*Turboshaft Engine Family*

The PW100 Turboshaft provides a solid foundation in new-generation helicopters. The PW100 turboshaft engine family has evolved as the natural extension of our leading PW100 airline turboprop engine family. With a range of 2,000 to more than 3,000 shaft horsepower, the PW100 Turboshaft will deliver outstanding reliability, durability and operating economics thoroughly demonstrated in the demanding airline industry. The PW100 Turboshaft will leverage the widely acclaimed, low fuel consumption and environmental friendliness of the PW100 turboprop engine.

**PW200**
*Engine Family*

Powering the majority of the world’s light-twin helicopters, the PW200 family is the proven benchmark in its class for rugged dependability and excellent operating economics. Ranging in power from 500 shp to more than 700 shp, the PW200's low fuel consumption, lightweight architecture, low environmental emissions and minimum maintenance features are fundamental to this engine’s sustaining appeal in the marketplace.

The PW206 and PW207 engines are marketed by P&WC Turbo Engines Corporation, a subsidiary of Pratt & Whitney Canada Corporation.

**PW210**
*Engine Family*

The PW210 engine is a new-generation turboshaft engine offering best-in-class performance in the 1,000 shp class for single-engine and intermediate-to medium-category twin-engine helicopters. By incorporating the latest advances in compressor design technology and turbine materials, the PW210 has the highest power-to-weight ratio and lowest fuel burn in its class.
Pratt & Whitney Power Systems (PWPS) has taken the advanced technology of our proven aircraft engines and applied it to a product line of industrial gas turbines. Whether it is for electric power generation or for applications requiring variable-speed mechanical drive such as marine propulsion, gas compression or liquid pumping, the Pratt & Whitney Power Systems 500 kW to 60 MW gas turbine engine portfolio offers competitive, efficient and flexible products. Power Systems has more than 2,000 industrial gas turbines installed in more than 50 countries worldwide.

In addition, Power Systems is a leader in Organic Rankine Cycle technology, a power solution for renewable energy sources such as geothermal, solar and biomass as well as waste heat recovery. The product uses heat from a geothermal or other heat sources to vaporize a fluid with a lower boiling point. The vapor creates pressure to power a turbine that generates electricity.

We have complete capability to meet all customer maintenance and technical support requirements. Power Systems also offers turbine components and repair services for competitors’ engines that are manufactured with stronger materials and higher temperature coatings for greater durability and longer service life.
IGT Parts and Repairs

Pratt & Whitney Power Systems offers customers improved, redesigned parts for use in 6B, 6FA, 7EA, 7FA and 7FA+e Industrial Gas Turbines (IGT). By utilizing unique Pratt & Whitney IGT advanced alloys, cooling management systems and coatings—both thermal barrier and corrosion-resistant—for new part offerings, customers can benefit from enhanced reliability, durability and advanced technology to lower operating costs.

PWPS also offers advanced high-technology repairs on hot section components for heavy-duty gas turbine models, providing customers with reduced fallout, scrap recovery and engine reliability.

FT8® Gas Turbine

A 30 MW industrial gas turbine, the FT8 engine is derived from the highly successful JT8D turbofan and is aerodynamically coupled with a multistage free turbine. The engine is compact, capable of using a variety of fuels and boasts a cycle efficiency of 39 percent—making it one of the most fuel-efficient gas turbines in its class.

FT8 SWIFTPAC® Unit

The SWIFTPAC power unit is designed for rapid and low-cost installation, providing 30-60 MW of power. The SWIFTPAC unit is designed for modular installations requiring minimal field infrastructure utilizing the industrial FT8 gas turbine. Current installation schedules plan for 21 days.

The FT8 gas turbine can be provided as a single unit or configured in the Pratt & Whitney TWINPAC™ arrangement. Each configuration offers quick installation, maximum operating flexibility, high efficiency and low emissions.

FT8 MOBILEPAC® Unit

The FT8 MOBILEPAC unit is an easily transportable solution for quick electric power. It is a compact, self-contained electric-generating unit powered by a FT8 gas-turbin engine, complete with all ancillary systems. It can be shipped by land, air or sea to anywhere in the world and delivers 25 MW of emergency power within just eight hours after arrival on a prepared site. For additional flexibility, the engines can operate on either distillate fuel or natural gas and in either 50-cycle or 60-cycle applications.
Turnkey Services
PWPS offers its equipment and services on a turnkey basis including power plant engineering, design, procurement of balance of plant equipment, installation, start-up and commissioning. This capability is offered both domestically and internationally.

Organic Rankine Cycle (ORC)
The PureCycle® and Turboden ORC power systems are closed-cycle processes that use hot water resources to generate electric power. The systems are driven by a simple evaporation process and are entirely enclosed, which means they produce no emissions. The only byproducts are hot water, electricity, and the fuel, hot liquid are renewable resources in many cases. In fact, for geothermal applications, the water can be reinjected into the earth, resulting in the ultimate recycling loop.

ORC power systems produce electric power from 280 kW to 10 MW and can operate on a wide range of resource temperatures starting as low as 195°F (91°C). By operating at lower temperatures than conventional geothermal systems, the PWPS ORC power systems enable geothermal wells previously deemed unproductive to become viable again.
Pratt & Whitney Global Service Partners has one mission—to help our customers succeed. With a global network of engine service facilities and a broad portfolio of service solutions, we will partner with you to provide solutions that meet your individual business needs. Global Service Partners delivers service you can depend on.

For over 85 years, Pratt & Whitney has been a leader in the engine industry, amassing a wealth of experience unmatched in the business. Today, Pratt & Whitney blends our OEM (original equipment manufacturer) capability with our MRO (maintenance, repair and overhaul) flexibility; we listen to our customers and provide exactly what they want from both parts of the business. That is why we call ourselves the OEMRO® company.

With our comprehensive engine overhaul services, we help you operate smoothly and cost effectively. We overhaul engines made by Pratt & Whitney, International Aero Engines and CFMI. With service centers all over the world including new overhaul facilities in China and Turkey, we can respond quickly and effectively.

Pratt & Whitney Global Service Partners also provides advanced, dependable repairs that increase part durability, extend time on-wing and lower your cost of ownership. We offer competitive turn times and innovative repairs on our own parts as well as parts for CFM56® and V2500® engines.

Our Scrap Avoidance and Value Engineering (SAVE) program has resulted in hundreds of new repairs and saved our customers millions of dollars.

**Our line maintenance teams get your engines back in service—fast. We perform boroscope inspections and blade blending repairs on-wing at your site. Our EcoPower® engine wash system cleans engines right on the tarmac using atomized water in a closed-loop, environmentally friendly system. A cleaner engine cuts fuel burn and extends parts life and time on-wing.**

Pratt & Whitney Global Service Partners will partner with you to manage the maintenance of your engines. On-wing or off, our fleet management programs will help you take care of engine maintenance cost and ensure reliability on a dollar-per-engine-flight-hour basis. We can help you forecast material needs, secure the material required to support your flight schedule, manage repair suppliers and analyze engine operational data to improve engine performance.

We use Advanced Diagnostics and Engine Management (ADEM) systems, a wireless tool that sends real-time engine data to the ground during flight. We can spot operational trends and maintenance issues early, before they cost significant time and money.

Our integrated and flexible network can respond with fleet management, engine overhaul, parts repair and line maintenance services to keep your aircraft flying, so you can focus on your customers.

*CFM and CFM56 are trademarks of CFM International*
Our customers want a dependable choice in CFM56® engine materials and services so they can decide for themselves how to become more efficient and competitive in their operations. Pratt & Whitney’s Global Material Solutions delivers substantial value and choice to our customers.

Pratt & Whitney received the first U.S. Federal Aviation Administration (FAA) and European Aviation Safety Agency (EASA) certifications granted for alternative life-limited parts. Supplemental Type Certificates (STCs) were awarded after numerous engine and rig certification tests.

Global Material Solutions is a natural extension of our service growth strategy and current overhaul and repair capabilities. At Pratt & Whitney, we take an OEMRO® approach to maintaining our customers’ engines. We design, manufacture and support our own engines as well as parts for competitor engines. Global Material Solutions integrates Pratt & Whitney’s technology, quality and customer service to create a powerful offering that responds to our customers’ needs.

For our customers, Global Material Solutions means Pratt & Whitney OEM-quality materials at a competitive price.

Pratt & Whitney Global Material Solutions is our continuing commitment to offer our customers comprehensive and flexible CFM56® engine maintenance services.

*CFM and CFM56 are trademarks of CFM International*
It's in our power.