

# **TURBOFAN**

# FW500E

FAMILY

THE LEADER IN FRACTIONAL BUSINESS AVIATION



|              | THERMODYNAMIC THRUST<br>CLASS* (POUNDS) | MECHANICAL THRUST<br>CLASS* (POUNDS) | HEIGHT**<br>(INCHES) | WIDTH**<br>(INCHES) | LENGTH**<br>(INCHES) |
|--------------|---|--------------------------------------|----------------------|---------------------|----------------------|
| PW545 SERIES | 4,400 to 4,700                          | 3,800 to 4,100                       | 47                   | 32                  | 68                   |
| PW535 SERIES | 3,800 to 4,100                          | 3,400                                | 38                   | 29                  | 66.5                 |
| PW530 SERIES | 3,100                                   | 2,900                                | 35                   | 28                  | 60                   |

<sup>\*</sup> Thrusts are approximate values at takeoff. Available at sea level, standard day, static conditions, uninstalled. \*\* Dimensions are approximate values.

### HIGH PERFORMANCE COMBINED WITH HIGH EFFICIENCY

Designed for light to mid-size business jets from engine to fully integrated power plants. The PW500 engine family combines high performance with excellent operating economics for all types of owners.

## **OVERVIEW**

PW500 engines incorporate the latest advanced technologies in the drive to exceed our customers' expectations in performance, fuel consumption and environmental friendliness. The PW500 family is comprised of three engine series and seven models, ranging from 2,900 to over 4,500 pounds of thrust, with more than 5,000 engines produced and an accumulated total of over 20 million flight hours. Success of the PW500 in the fractional ownership and general business jet markets stems from its impressive operating economics, complemented by comprehensive maintenance cost guarantee plans.

## **FEATURES**

The PW500 is a two-spool engine with a three-stage high-pressure compressor driven by a single-stage, cooled high-pressure turbine and multi-stage low-pressure turbine driving a robust, efficient fan. The PW535 and PW545 series incorporate an added compressor-boost stage driven by the turbine. A high-efficiency reverse-flow combustor provides low emissions and low fuel consumption. An advanced exhaust mixer further contributes to the engine family's high efficiency, as well as low emissions and noise. The overall result is a durable, compact, light-weight design that powers the majority of fractional business jets.

## **TECHNOLOGY**

| FAN  | THREE-STAGE<br>HIGH- PRESSURE<br>COMPRESSOR  | REVERSE-FLOW<br>COMBUSTOR         | SINGLE-STAGE<br>HIGH- PRESSURE<br>TURBINE  | TWO-STAGE<br>LOW-PRESSURE<br>TURBINE                              | FULL AUTHORITY DIGITAL ENGINE CONTROL (FADEC) Electronic engine control capable (available on some models) |
|--|--|-----------------------------------|--|---|--|
| Resistant to FOD<br>(foreign object<br>design)<br>Wide chord for a<br>robust and efficient<br>design | Two-stage<br>axial and single<br>centrifugal,<br>integrally bladed<br>rotors (IBRs) to<br>reduce parts count | Low emissions,<br>high durability | High efficiency<br>for low fuel<br>consumption<br>Advanced<br>materials and<br>cooling technology<br>for long, hot-end<br>life | High-efficiency<br>mixer for high<br>performance and<br>low noise | Ease of operation Increased accuracy with thrust control Intelligent health monitoring and diagnostics     |

Operators of the PW500 engines are supported by Pratt & Whitney's industry-leading global customer support. The network includes over 40 Pratt & Whitney-owned and designated service facilities around the world, more than 100 field support representatives on all major continents, a 24/7 Customer First Centre for rapid expert support, the most advanced diagnostic capabilities and the largest pool of Pratt & Whitney rental and exchange engines in the industry.