



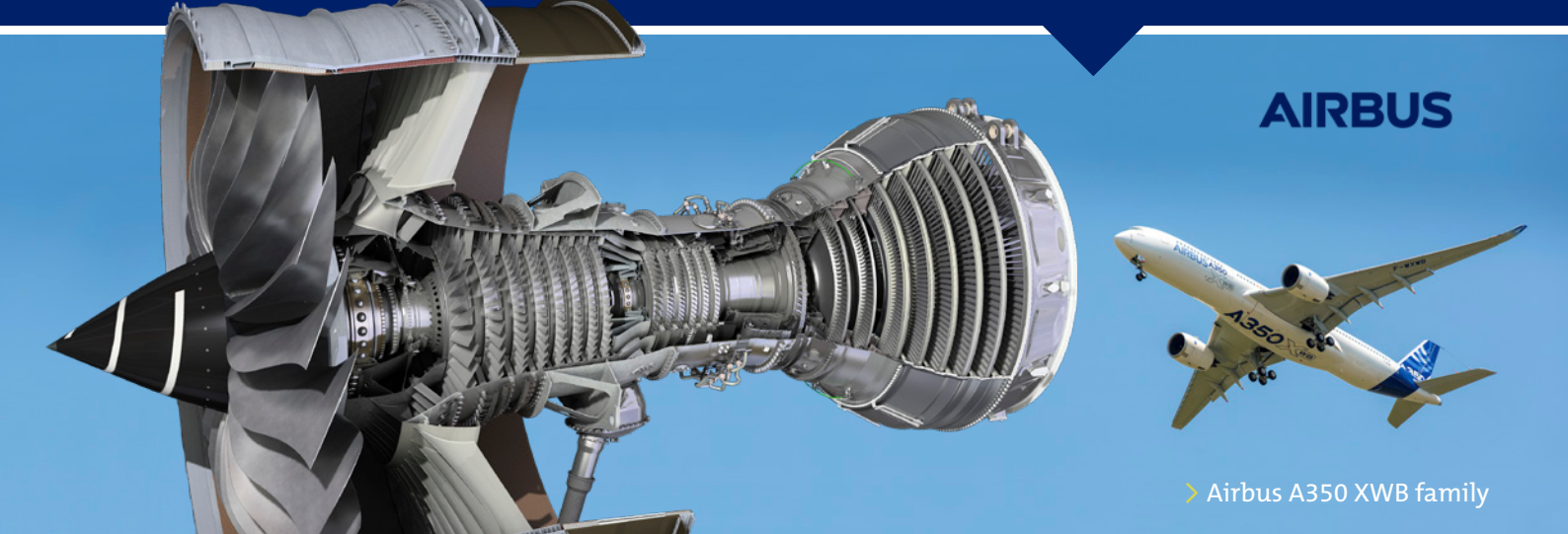
Rolls-Royce

Trent

XWB

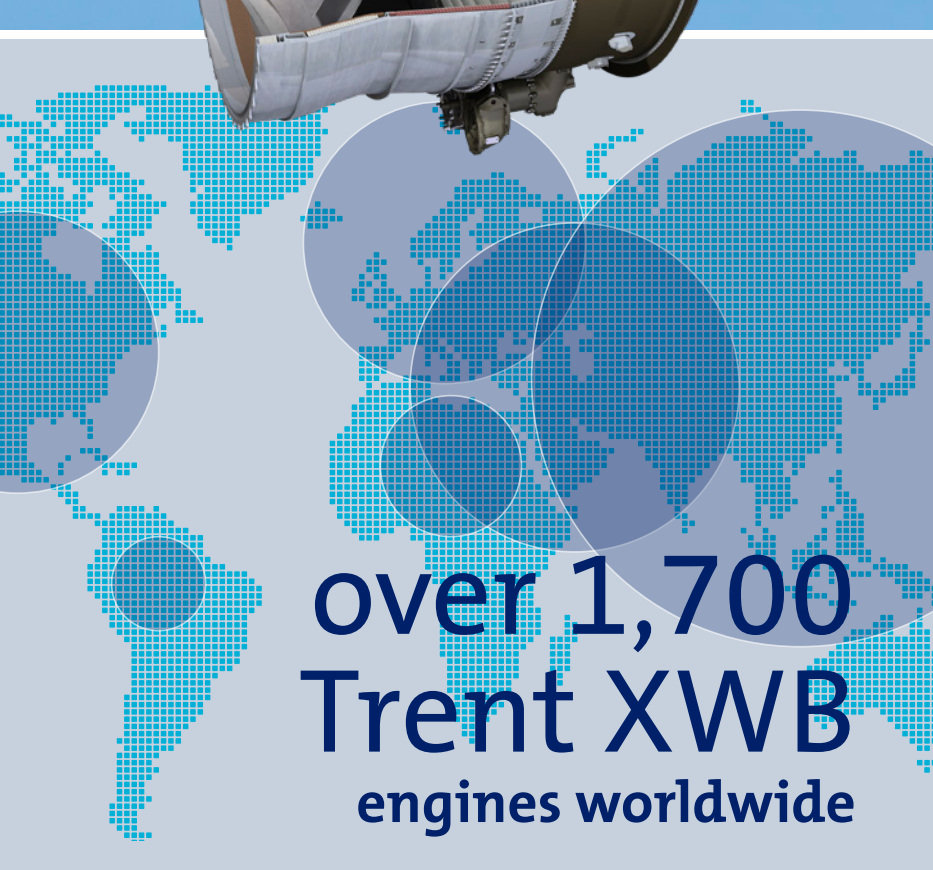
The world's  
most efficient  
large aero  
engine

The Trent XWB is setting new standards of efficiency, life cycle costs and environmental impact through hours of engine and flight testing. These attributes have made it the fastest-selling widebody engine ever.



AIRBUS

Airbus A350 XWB family



over 1,700  
Trent XWB  
engines worldwide

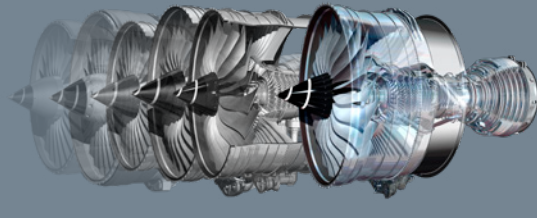


The **sixth**  
member of the  
highly successful  
Trent family

Fastest-selling  
widebody  
engine ever

More than 1,600 Trent XWB engines have been sold worldwide in 30 countries, across every continent.

This market success cements the strong relationship that Rolls-Royce and Airbus have nurtured since the Trent 700 entered into service on the A330, 20 years ago.



A single HP Turbine blade generates  
**800** horsepower,  
equal to that generated  
by a Formula 1 racing car



The Trent XWB has  
**68 turbine blades**



The HP Turbine generates over

**50,000**  
horsepower



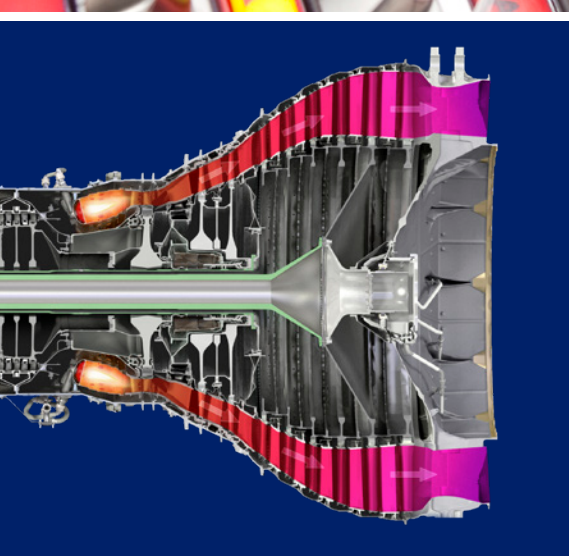
**shaping efficiency**

The highly innovative design of the Trent XWB combustor incorporates advanced ceramic coatings.

This allows a mixture of air and fuel to be heated to burn at temperatures exceeding

**2,000°K** **twice the temperature of molten rock**

The result is a combustor that delivers extremely low fuel burn and emissions.



**optimised, efficient, proven**

Extensive demonstrator programmes have resulted in improved compressor and turbine efficiency - this means a

**ten per cent**  
**reduction in fuel**  
**consumption,**

saving our customers around

**US\$2.9 million**

per year per aircraft in fuel costs alone.

1. Our ultra-efficient swept fan enables a quieter operation and optimum engine core protection.

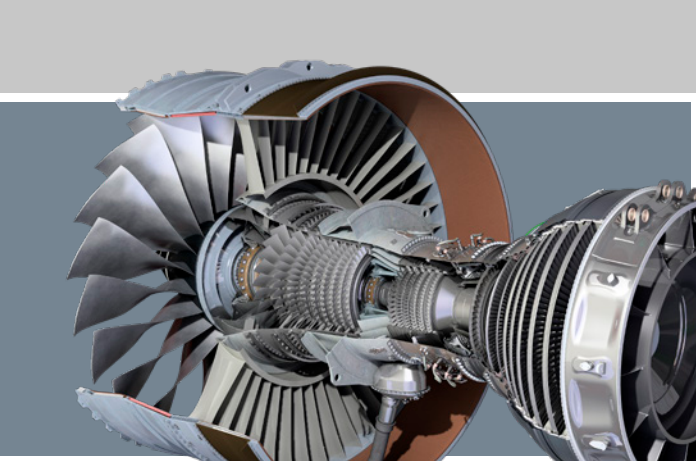
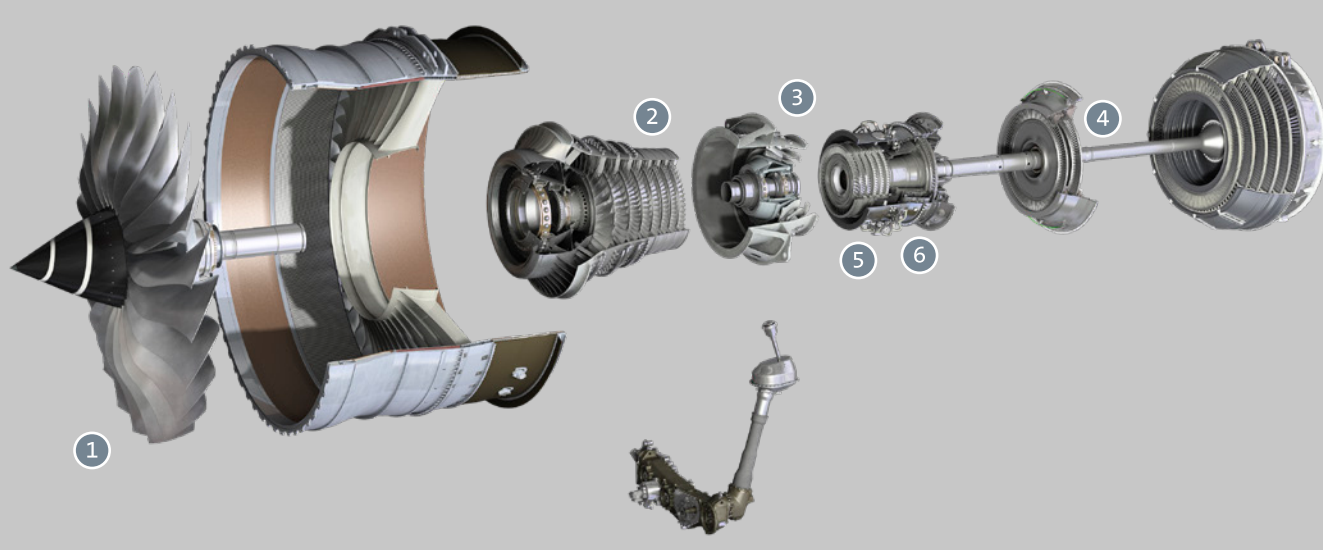
2. Advanced compressor aerodynamics delivering module weight-savings of 15 per cent through blisk technology.

3. Optimised bearing load management system reducing sealing air requirements to deliver improved performance.

4. 2 Stage LP Turbine delivers improved efficiency, greater thrust capability and reduction in fuel burn.

5. Intelligent management of internal air systems reducing the core engine demand for cooling air and decreasing fuel burn.

6. Single skin combustion casing reducing engine weight and simplifying engine maintenance.



**Trent XWB Technical Data**  
Configuration: Three-shaft turbofan  
Thrust: 84,000–97,000 lbf  
Bypass Ratio: 9.6:1  
Overall Pressure Ratio: 50:1  
Fan: 22 blades, 118" diameter

Intermediate Pressure Compressor: 8 stages  
High Pressure Compressor: 6 stages  
Noise: QC 0.5 departures/ QC 0.5 arrivals  
High Pressure Turbine: Single stage  
Intermediate Pressure Turbine: Dual stage  
Low Pressure Turbine: 6 stages

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