

EJ200

ENGINE FOR THE EUROFIGHTER TYPHOON



EJ200 – technology features

The EJ200 was developed by an international European consortium consisting of MTU, Rolls-Royce, Avio Aero and ITP Aero and is still in production today. This advanced 20,000 pound force thrust-class engine is used to power the Eurofighter and its export version, the Typhoon.

MTU's share of manufacture is about 30 percent. MTU developed the low- and high-pressure compressor and the electronic control unit (DECMU, Digital Engine Control and Monitoring Unit) and manufactures these components for all engines operated by the German Air Force (GAF) and the partner nations as well as for export customers. MTU is also responsible for the final assembly, testing and maintenance of all GAF and Austrian Armed Forces engines.

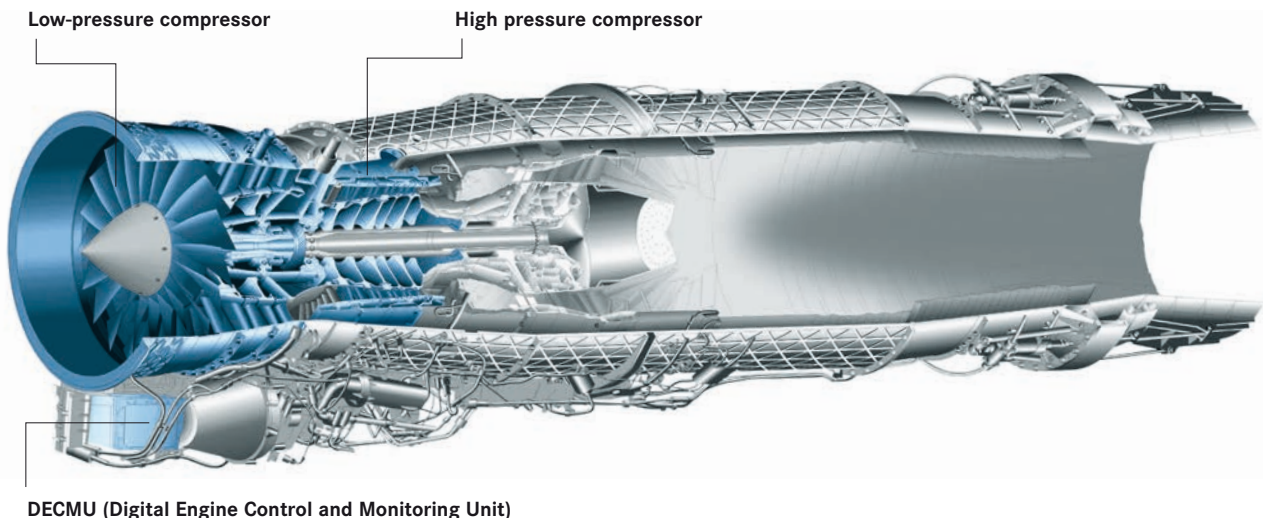
For the EJ200, MTU for the first time designed compressor stages in blisk design (blade integrated disks), which are now also being used very successfully in MTU components for commercial engines. MTU is now one of the world's leading manufacturers of this blisk technology and operates a modern and pioneering manufacturing system at its Munich site, also for compressor rotors for commercial engines.

Facts

- EIS: 2013
- Two-shaft turbofan engine with afterburner in the thrust category 20,000 lbf
- Modular design (15 fully interchangeable modules)
- Low-pressure compressors with 3 stages in blisk design
- High pressure compressors with 5 stages partly in blisk design (3 stages blisk, 2 stages conventional)
- Single-crystal turbine blades
- Convergent/divergent nozzle
- Digital control with integrated health monitoring and life cycle monitoring
- On-condition maintenance concept

MTU share

- 33% development
- 30% manufacture
- Development and manufacture of low-pressure compressor, high-pressure compressor and Digital Engine Control and Monitoring Unit (DECMU)
- Final assembly of engines for the German Air Force and for the Austrian Armed Forces
- Maintenance in cooperation with the German Armed Forces at MTU in Munich/Erding



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TECHNICAL DATA

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|---|----------------------------------|
| Max. thrust with afterburner: | 20,000 lbf |
| Max. thrust without afterburner: | 13,500 lbf |
| Pressure ratio: | 26:1 |
| Bypass ratio: | 0.4:1 |
| Length: | appr. 157 in |
| Max. diameter: | 29 in |
| Weight: | appr. 2,204 lbs |
| Application: | Eurofighter/Typhoon |
| Partners: | Rolls-Royce, Avio Aero, ITP Aero |