HELICOPTER TRANSMISSIONS

ON BOARD WITH US
If you are looking for:
A reliable and winning partner
Over 50 years of experience in PGB and AGB design and manufacturing
Advanced design capabilities
A total solutions provider
International support team
An experienced casting partner
Full support for CRO and MRO activities

THEY’VE ALREADY CHOSEN US
Airbus Helicopters
Sikorsky
General Electric
Italian Air Force

Avio Aero
A GE Aviation Business

YOUR TECHNOLOGY PARTNER
HELICOPTER TRANSMISSIONS

DID YOU KNOW?
Over 50 years of experience. We started designing and manufacturing helicopter gearboxes back in the '60 and we have a proven track record of success, from Main Gearbox Modules and Components to Helicopter and Engine Accessory Drives. We developed some of the most advanced transmissions for both Commercial Engines (GEnx), Military Engines (EJ200) and Turboprops (TP400). We can support our Customers in all phases of the product lifecycle thanks to a dedicated transmissions CRO shop. We work every day to make our products more competitive through new technologies (proprietary “HyGO” Bevel Gears/Additive Manufacturing/High Temperature materials) and innovative solutions (patented AvioDriveX2).

YEARS EXPERIENCE

TAKE A LOOK AT WHAT WE CAN DO

ALL AROUND DESIGN
- Co-design with customer engineering
- High power density gearbox design
- Low part count design for improved reliability
- Split torque architectures
- High and low speed epicyclic systems
- Fireproof design
- Integrated lube systems & components
- Air/oil system technologies
- Whole system modeling and dynamics assessment
- Damage tolerance and 3D crack propagation
- Virtual testing
- Advanced gear design methodologies (true stress approach)
- Robust bevel gear optimisation: from contact surface to machines summary through proprietary HyGO software
- Bi-helical gears
- Hot hardness steels
- High strength bearing materials
- Integral bearing races
- Health monitoring system
- Light alloy housing with integral cored lines
- Castings design and melting process simulation
- Assembly tool concept definition, design and construction

BEHIND THE PRODUCTION PROCESS
- Proven track record across different products and platforms with extensive product range
- Vertically integrated process on key components (gears & housings)
- Solid functional integration for production readiness
- State-of-the-art process design tools
- Cross-sector knowhow, in design, testing and inspections
- Dedicated lean production cells
- Rapid prototyping technologies

OWN FOUNDRY
- Aluminum & Magnesium aerospace alloys
- Gravity precision, low turbulence and differential pressure technologies
- Long heritage on different applications (ADTs, PGBs and Helicopter MGBs)
- Simulation tools for concurrent product definition with customers

TESTS & MEASUREMENTS
- In house design expertise for development & certification test rigs
- Endurance testing with representative propeller loads, oil flows and temperatures
- Automatic mission simulation
- Lube System and Attitude testing
- Efficiency measurements
- Vibration measurement & analysis
- Static fatigue testing
- Thermal mapping
- Components testing

WE CARE, WE OVERHAUL
- ADTs, PGBs, Oil pumps and Oil tanks

CONNECT WITH US
transmissions@avioaero.com - www.avioaero.com

OUR HELICOPTER TRANSMISSIONS PLANTS ARE LOCATED IN:

RIVALTA DI TORINO (ITALY)
167,000 Sqm specialised in Design and Machining

BORGARETTO/BEINASCO (ITALY)
25,000 Sqm specialised in Casting

TURIN (ITALY)
12,000 Sqm specialised in Testing

POMIGLIANO D’ARCO (ITALY)
78,000 Sqm specialised in CRO

HARBIN (JV IN CHINA)
27,000 Sqm specialised in Machining

SA321 >100
SA330 >1000
SA345 >1000
EC155 CH53
AC313 GL >15000
T700 X4

AVIO AERO DESIGN BUILD TO PRINT PARTS PRODUCED