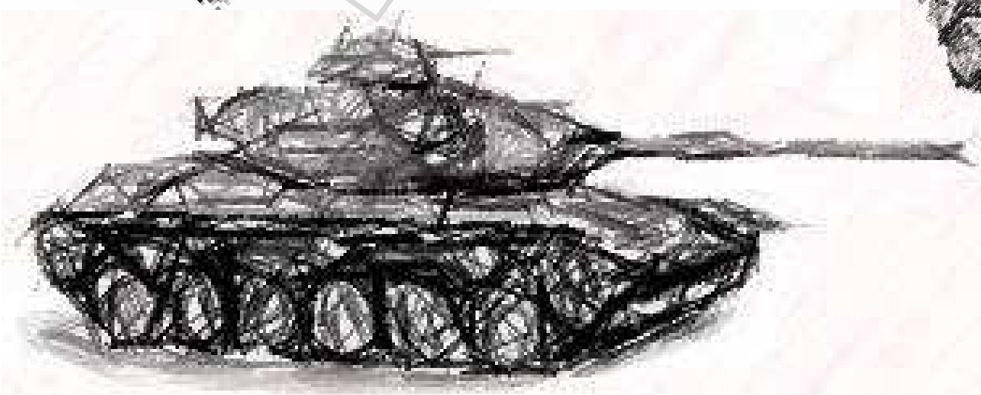
Traction eMotor

Propeller Propulsion eMotor

Generator for Aviation

eMotors for Fans&Blowers

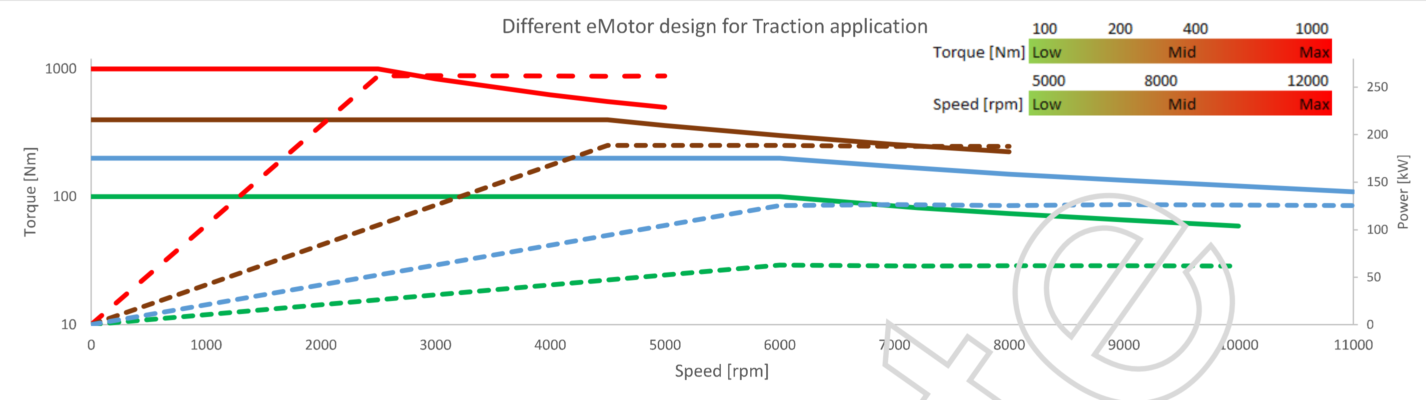
eMotors for Pumps



New Technology eMotors Design&Production for Military Application

Traction eMotor

Permanenet magnet motor technology is used in our design to achive high power to mass ratio [kW/kg] and high efficiency level. Many kinds of permanent magnet design topologies are used depending on torque, power and speed requirements of applicaiton.

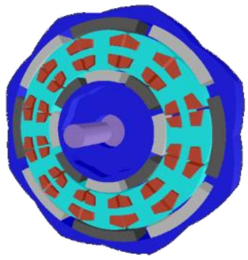


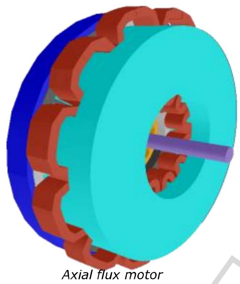
- High torque and low speed
- High pole numbers >30
- Up to 5kW/kg
- Axial flux motor or double rotor radial flux motor are favorable

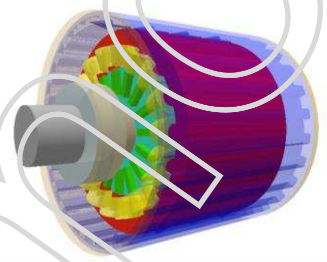
- High torque and mid speed
- High pole numbers >30
- Up to 5kW/kg
- Axial flux motor or double rotor radial flux motor are favorable

- Mid torque and high speed
- Low pole numbers < 20
- Up to 8kW/kg
- Radial flux motor with inner rotor type motor is favorable

- Low torque and high speed
- Low pole numbers <10
- Up to 9kW/kg
- Radial flux motor with inner rotor type motor is favorable


Double stator and rotor radial flux motor


Axial flux motor


Radial flux inner rotor type motor


Prototype of Radial flux inner rotor type motor 116kW 11.000rpm 2.3kW/kg

eMotor for Propeller Propulsion

For propeller aircraft and Remote Piloted Vehicle (İHA), eMotors can be designed with special cooling system to reach high kW/kg ratio for lightness and smallness. Air and liquid cooling can be combined for better cooling performance. Main loss in electrical motor is copper losses so stator is cooled with liquid and rotor is cooled with air. Direct drive of propeller is more reliable than drive with gear box. Permanent magnet motor can be designed with 2500-3000rpm speed and 800-1000Nm torque for direct drive.

Generator for Aviation

Permanent magnet or wound rotor type of generator design can be made for aviation applications by meeting military standarts. Special rotor design with different magnet placement method against centrifugal forces is used for high speed turbogenerator system to reach high efficiency.

eMotors for Fans&Blowers

High efficient and high speed eMotors can be designed with special rotor construction to run at high enviroment and air temperature for high flow ratio. The same concept can also used for smoke extraction system that needs high temperature endurance.

eMotors for Pumps

Wet or dry rotor permanent magnet motor technologies are used in our design for pump application. For reliable operation in wet rotor application, motor design is performed by using special bearing system. Wet rotor technology is generally used for fuel pump system in İHA or missiles.