

Project title | Develop the world's best-performing actuators (large/small)

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Selected topics

- 1) Develop the world's best-performing electromagnetic motor
 - ▶ Develop a high power density/ high-efficiency compact motor (50 w/25 g)
 - ▶ Develop a waterproof and dustproof (1 kw/400 g) high-output motor
 - ▶ Develop a high-torque (110 Nm/1 kg) actuator system
- 2) Develop space-resistant sensor systems
 - ▶ Develop a small and high resolution resolver (ϕ 20 mm resolution 524288)
- 3) Develop a smart fluidic actuator system
 - ▶ Contraction force more than three times that of the McKibben artificial muscle

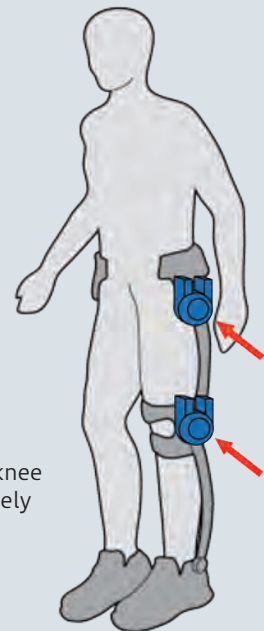


Aerospace application

1. Mars aircraft, drone
2. Mars rover
3. Casting device
4. Two-axis gimbal

Terrestrial application

1. Wind generators / Hydro generators
2. Drones and robots
3. Nursing care products such as power suits and wheelchairs



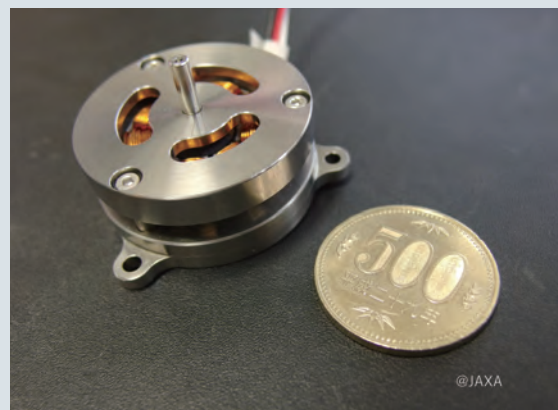
The torque of the knee joint is approximately 100 N-m



Ultra-small sensor for absolute angles
Outer dimensions of product :
Square 20 mm and thickness 7.5 mm
Resolution 1048576



Primary prototype of IP56 clear dustproof and waterproof motor



high power density/ high-efficiency compact motor (85 w/25 g)