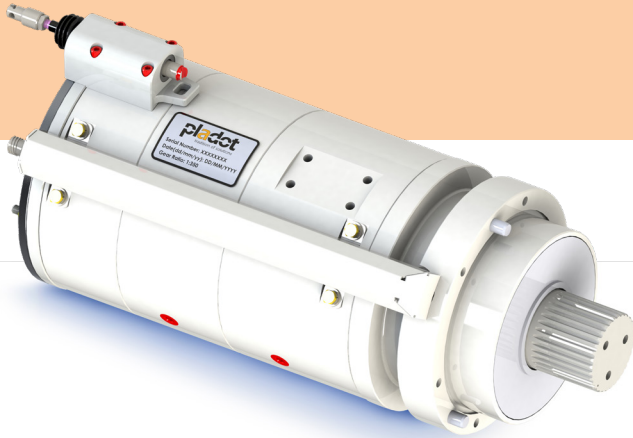


Planetary Gearbox for Electric Ramp Door

gevasol Ping

February | 2025



- Harsh Environment
- Heavy Loads
- High Impact



A Compact, Efficient and Reliable Torque Transmission System

Challenge

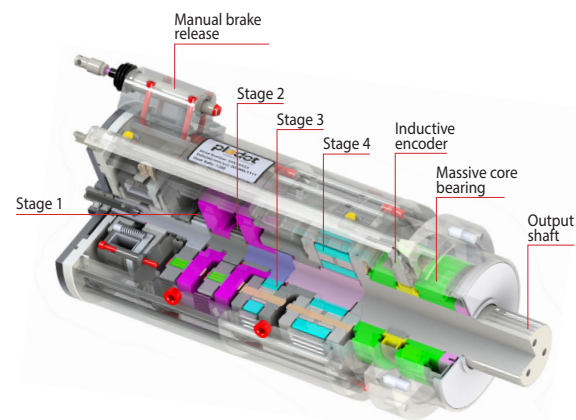
Armored Personnel Carriers (APCs) need reliable electric ramp doors that handle heavy loads, provide high torque, and meet MIL-STD-810G standards.

Solution

Gevasol Motion Systems' planetary gearbox ensures high torque, durability, and compliance with military standards for seamless ramp door operation.

Features

- A 1:350 gear ratio efficiently generates the necessary torque for lifting and lowering heavy-duty ramp doors.
- Continuous torque of 4,000 Nm, with intermittent capability up to 12,000 Nm, ensures heavy load capacity.
- Designed with a safety factor of 5, it withstands breaking torques exceeding 20,000 Nm.
- The 12 VDC brake provides 40 Nm holding torque and includes a manual release option for emergency operation.
- Complies with MIL-STD-810G, ensuring resistance to shocks, vibrations, sand, dust, water, salt mist, and humidity.
- IP67-rated sealing guarantees impermeability to water and contaminants.
- Operates reliably within a temperature range of -10 °C to 70 °C.
- An integrated inductive encoder enables precise position feedback.
- Massive core bearings enhance load distribution and durability.



Main Specifications

Gear:

Input Speed: 1200 RPM
Gear Ratio: 1:350
Weight: 107 Kg

Torque:

Continuous Output: 4,000 Nm
Intermittent Peak: 12,000 Nm
Safety Factor: 5 (Breaking Torque > 20,000 Nm)

Brake:

Operating Voltage: 12 VDC
Holding Torque: 40 Nm
Manual Release for Emergency Use

Environmental Conditions:

Sealing: IP67
Temperature Range: -10°C to 70°C
MIL-STD-810G Compliance:
Shock Resistance
Sand, Dust, and Water Impermeability
Salt Mist and Humidity Resistance
Durability for Diesel Fuel

Built to need, we design, adapt, and integrate our solutions to the customer requests and beyond..

Contact us: marketing@gevasol.com

pladot
tradition of solutions
www.pladot.co.il