

## IP LICENSING & COMMERCIALISATION

SALIM SULEMAN MAJID

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SALIM D C ELECTRIC MOTOR

Patent No. : 537816

# OVERVIEW

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Our patented DC Motor Design, **SALIM D C ELECTRIC MOTOR**, is a revolutionizing DC Motor. It is a novel and proprietary electric motor design utilizing improved force mechanics to deliver enhanced performance over traditional motors. It overcomes the limitations of a traditional Faraday Motors in force distribution and torque output.



# Understanding the Problem with Traditional DC Motors (Faraday Motor)

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- **Forces Distribution Issue:**

At  $90^\circ$  and  $270^\circ$ , forces are zero.

At  $0^\circ$  and  $180^\circ$ , forces are at a maximum.

In other angles, forces are variable and less efficient.

- **Result:** Reduces motor efficiency and torque consistency.



# Technical Solution - The Salim Motor

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- **Armature Design Change:** Transition from a rectangular to a circular design.

Benefits: Ensures consistent force distribution across all angles.

- **Modified Rotation Axis:** Shifted from OY to OX axis to optimize rotational movement.
- **Optimal Angle Alignment:** Maintaining angle  $\theta$  close to  $90^\circ$  maximizes force output.

# Salim Motor's Technical Design Features

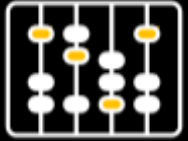
- **Battery Source:** Supplies the DC power.
- **Starting Switch and Regulator:** For controlling power flow.
- **Armature:** Redesigned for a circular motion around the OX axis.
- **Commutator and Carbon Brush:** For current direction switching and power delivery.
- **Magnetic Field Setup:** Two magnets facing each other with the armature in between.
- **Ball Bearings and Pulley:** For mechanical operation and motion transmission.

# Technical Principles of Salim Motor

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- **Alignment of Armature:** Nearly perpendicular to magnetic poles for better interaction.
- **Force Vector Orientation:** Force ( $F$ ) aligns with velocity ( $V$ ) for improved efficiency.
- **Current and Magnetic Field Relationship:** Current ( $I$ ) is perpendicular to magnetic flux ( $B$ ), maximizing torque.





# Performance Advantages Over Traditional DC Motors

## Increased Torque Output:

- Faraday Motor Torque (M1):  $6 Fl$
- Salim Motor Torque (M2):  $8 Fl$ , providing better mechanical output.

## Energy Efficiency:

- Reduced energy losses due to optimized force alignment.



# Potential Applications of the Salim DC Electric Motor

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- **Electric Vehicles:** Enhances motor efficiency, improving vehicle range and performance.
- **Drones:** Provides smoother and more stable flight dynamics.
- **Industrial Machinery:** Suitable for both stationary and mobile applications.
- **Electricity Generation:** Functions as a generator when used in reverse mode.





# Market Analysis and Potential

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- **Growing Electric Vehicle Market**

Demand for efficient motors driven by EV adoption.

- **Industrial Automation Needs**

Increasing requirements for reliable motors in machinery.

- **Drone Market Expansion**

Rapid growth in consumer and commercial drone applications.

- **Generator Market Opportunities**

Expansion in renewable energy sector for efficient generators.

# Competitive Edge

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- **1. Cost-Effectiveness:** Reduced operational costs due to consistent performance.
- **2. Versatility Across Industries:** Applicable in various sectors, including automotive, industrial, and aerospace..
- **3. Enhanced Efficiency and Torque Output:** Provides better overall motor performance.



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