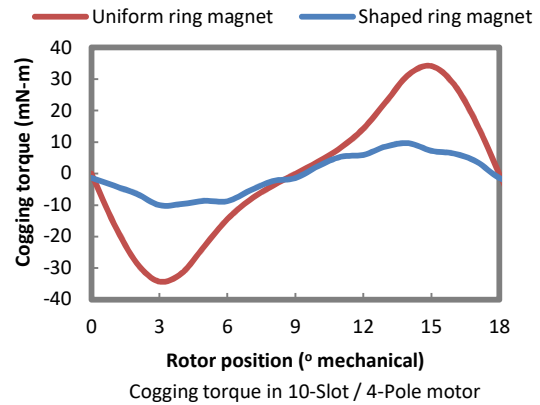
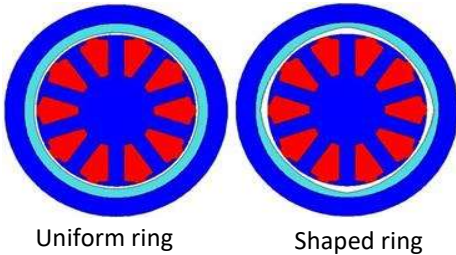


# EFFECT OF MOTOR DESIGN PARAMETERS ON COGGING TORQUE– PART 2

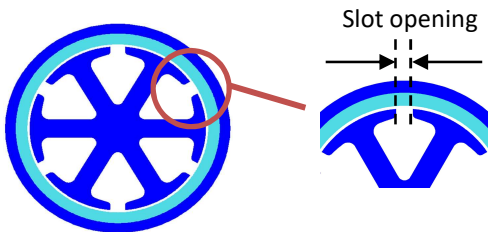
Reduction of cogging torque helps in reducing the motor noise generated due to electromagnetic causes.

## Shape of Magnet

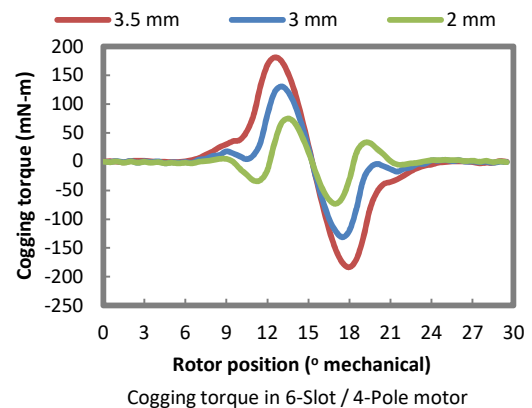
- Magnet shaping will change the airgap flux profile and hence the harmonics.
- Elimination or reduction of certain harmonics will lead to lower cogging torque.



## Size of Slot Opening



- Smaller slot opening offers lower change in magnetic circuit reluctance and hence reduce the cogging torque.



## Number of Pseudo Slots

- Pseudo slots increase the effective number of teeth as seen by airgap flux.
- Number of pseudo slots per tooth resulting in fractional slot/pole system help to lower the cogging torque.
- Mechanical stability and production feasibility need to be considered while deciding the number of pseudo slots and its dimensions.

