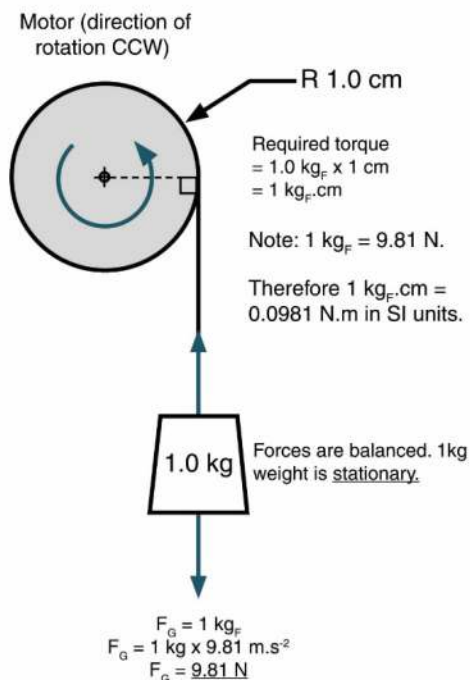


Force and Torque

Rotary motors:

Torque is the rotational equivalent of linear force.

To calculate the necessary torque needed in a system we need to translate the needed force into torque. For example:



In this example we calculated the needed torque for balancing a 1Kg weight through a 1cm radius wheel connected to a motor. The force downwards is +/- 10N. If we had a 1meter radius we would have needed 10Nm of torque , but since its 1/100 of a meter ,we need 0.1Nm from the motor.

For some applications we need the nominal torque of the motor to be higher than the torque needed, and in other applications it's enough if the pick torque of the motor is higher than the torque needed. Depending on the duty cycle.