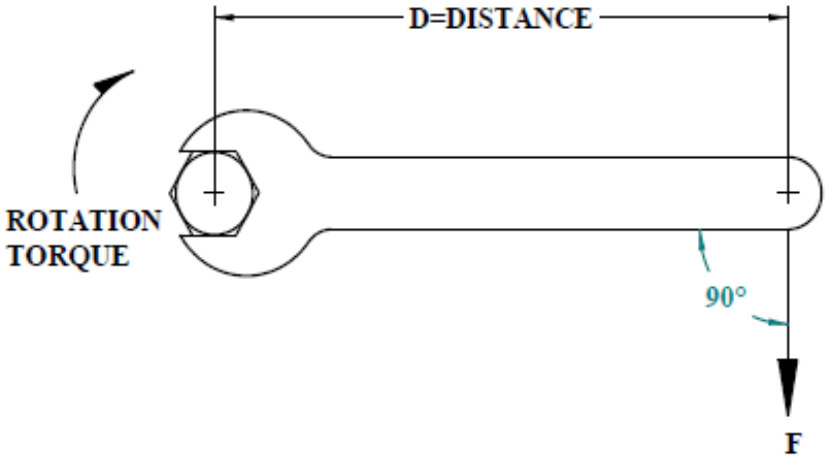
What is Torque?

Torque (T) is any force about a given axis that produces rotation as a moment. The magnitude of the moment is the product of the force (F) and the perpendicular distance (D) from the line of action of the force to the axis, T=F x D.
Simply output torque is generated by a twisting force which produces rotation about an axis.



Torque conversions		
Ft-Lb	In-Lb	Nm
1	12	1.36
5	60	6.80
10	120	13.60
20	240	27.20
40	480	54.40
80	960	108.80
100	1200	136.00
200	2400	272.00
400	4800	544.00
600	7200	816.00
800	9600	1088.00
1000	12000	1360.00

Helpful Terms

ICI manufactures compact quarter turn electric actuators. The word compact defines the torque range below 10,000 lb-in (1130 Nm). While we do offer larger torque actuators and different style actuators like multi-turn actuators (actuators rotating more than 360 degrees) and linear actuators (actuators drive that move axially instead of rotary) our niche is in the compact quarter turn market. ICI actuators are used for on-off service (valve operated to full open/close position to start or stop flow) as well as modulating service (valve positioned to throttle or regulate flow).
In the electric actuator world a limit switch is the device that controls the end position of the actuator, the actuator limits. This term is often confused with a limit switch that is used on pneumatic actuators to transmit valve position. When using electric actuators the "pneumatic limit switch option" is known of as auxiliary switches, extra limit switches or auxiliary limit switches. Contrary to pneumatic actuators where the limit switch is mounted externally with an electric actuator the auxiliary limit switches are installed inside the actuator enclosure. Actuator limits for compact quarter turn electric actuators are normally 0 (closed) and 90 (open) degrees.
ICI electric actuators are equipped with manual over rides. A manual over ride allows the user to rotate the valve manually in the event of a power failure. Our 400 lb-in (45.2 Nm) actuators and larger are equipped with declutching manual over rides. Declutching manual over rides disengage from the gear train enabling the user to turn the valve with greater ease.
ICI also manufactures a line of electric fail-safe devices which are battery back up systems that invert 12Vdc battery power to 115Vac square sine wave power upon unexpected loss of main supply power allowing standard actuators to operate valves open or close in an emergency.