1. C-Spec, Inc., is attempting to determine whether an existing machine is capable of milling an engine part that has a key specification of 4 ± .003 inches. After a trial run on this machine, C-Spec has determined that the machine has a sample mean of 4.001 inches with a standard deviation of .002 inch.
2. Calculate the $C\_{pk}$ (capability index) for this machine.
3. Should C-Spec use this machine to produce this part? Why?

Please solve using Excel.