

Monitor vacuum on a CNC machine

APPLICATION C192

Type of Company: **Manufacturer, Milled Parts**

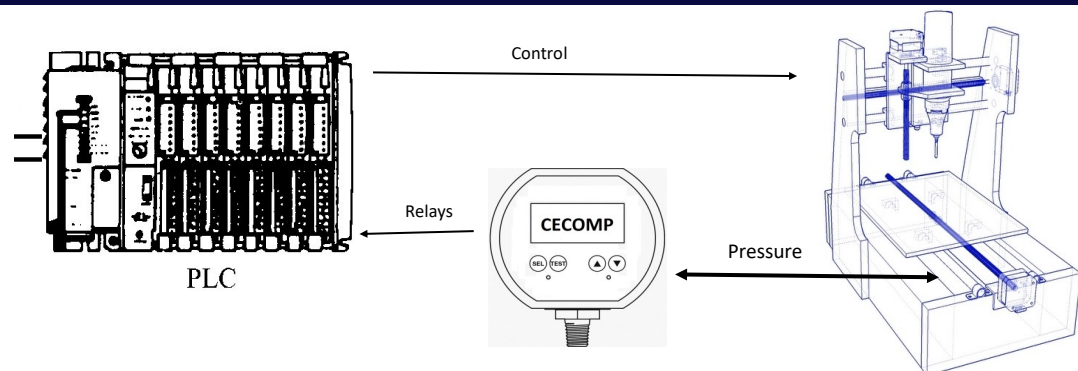
Location: **Minnesota**

Milling machines were first invented to mass-produce interchangeable parts. Although the first machines were crude, they assisted man in maintaining accuracy and uniformity while duplicating parts that could not be manufactured with the use of a manual file. This eventually resulted in the development of computerized machines to alleviate errors and provide better quality in the finished product. A **computer numeric controlled** (or CNC) device refers to any machine tool (i.e. mill, lathe, drill press, etc.) that uses a computer to electronically control the motion of one or more axes on a machine.



The Engineering Issue

- The engineer uses a vacuum system to hold the material onto the machine work table, so the vacuum system must be operating properly before the machine begins operation.
- The engineer requires a visual indication for the operator and a signal to the computer to ensure that the vacuum is at the proper level.



The engineer used a Cecom F16ADA digital pressure gauge with alarms. The gauge is configured so that, if both LEDs on the front face are green, the vacuum is at the proper level. The operator can use the LCD display to verify the vacuum levels. The relay sends a signal to the PLC so that the machine cannot operate if the vacuum level is not at the proper level.

Problem. Solved.

