
AC-AC LVDT in Pill-Making Machine

Trans-Tek's involvement in the medical industry has been well documented in application notes and articles through the years. Another interesting story describing the use of our transducers in this field comes from an innovative company that designs and builds machine presses that fabricate medicine pills and tablets. This process is sometimes referred to as "tableting".

Through constant monitoring of several moving components, the Model 0216-0000 AC-AC LVDTs (± 0.50 " stroke) ensure that each pressed tablet is correctly made to a predetermined thickness and weight. Each LVDT is wired to a Model 1000-0012 O/D to facilitate DC-in/DC-out operation. A newer machine uses four of each item in a dual process that produces two pills per cycle.

There are two tablet specs that are controlled through position feedback of the LVDTs: thickness and weight.



Pill thickness is achieved by compressing the medicinal powder under the pressure of two rollers moving toward each other. With the LVDT located in the base of the machine, the core is linked to the roller mechanism by way of tie bars. Using the LVDT to precisely monitor the gap between the rollers, a perfect pill thickness is guaranteed each time.

Pill weight is also dependant on the high accuracy of our LVDT. A second LVDT is used to track position of a "slider ramp" that holds the medicinal powder. The amount of powder determines the eventual weight of the tablet, making this a critical step in the process. The LVDT measures the height of this ramp - similar to a weigh scale - again ensuring the perfect-sized pill.

Numerous companies in the medical world have found that taking accurate displacement measurements is possibly the most important aspect of their applications.

And many of them have turned to Trans-Tek to accomplish this task effectively.