

Zenith PEP-II Pumps...

For Improved Uniformity and Accuracy in Medical Tubing

Industry Challenge

To ensure quality and repeatability in medical tubing, producers must control extruder variations such as pressure fluctuations, viscosity inconsistencies, and density changes.

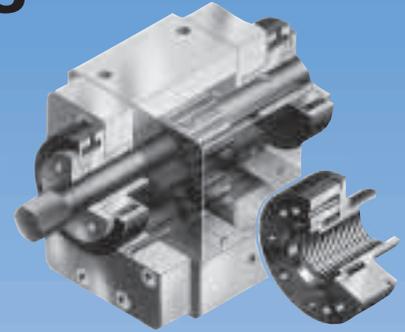
The Zenith Solution

By utilizing a Zenith PEP-II gear pump on a medical tubing line, manufacturers can more effectively control the melt delivery to the downstream equipment. The PEP-II pump regulates the back pressure on the extruder to minimize residence time and stabilize the plasticizing action of the extruder. This achieves a controlled melt quality and reduced melt temperature, ensuring a product that's reliable, repeatable, and economical.

How You Benefit

Improved Gage Control—Medical tubing has an outside diameter that can range from 0.030 to 0.500". With the many profile shapes, its walls can become very thin—as low as 0.003"—for ultrathin single- or multi-lumen tubing. A PEP-II pump can maintain these tight tolerances, especially at low levels. In fact, a properly installed pump can achieve a tolerance of ± 1 percent of the outside diameter, offering an improvement of up to 50 percent over lines not using gear pumps.

Greater Process Uniformity—The installation of a PEP-II pump on a medical tubing line enables a constant volumetric output and dampens process fluctuations. The accuracy of the melt delivered downstream is virtually unaffected by variations in melt tem-

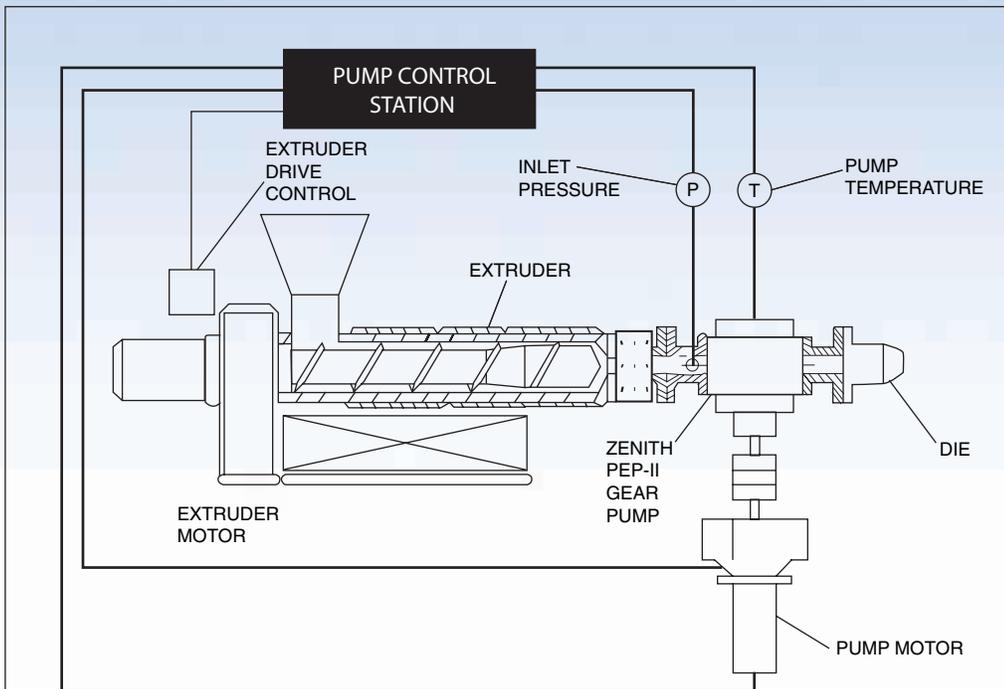


Zenith PEP-II Pump
Provides greater uniformity and product stability

perature or viscosity, as well as extruder surges or pulsations. As a result, product stability and repeatability are greatly improved.

Improved Product Quality—The PEP-II pump improves product quality by reducing the polymer's heat history. By allowing the pump to handle pressurization, the back-pressure on the extruder is reduced, thereby reducing

the heat imparted to the polymer. In some applications, this has resulted in a lower overall processing temperature of 10-14°F.



Zenith offers a complete line of PEP-II pumps and metering systems to handle the medical tubing process.

Zenith[®]
Pumps