Pneumatic systems in the field don’t necessarily consume air all that efficiently, so one important step in lowering energy costs is understanding where the losses occur. That’s where Festo’s Energy Monitoring System can help.

Using a collection of intelligent sensors, the system automatically monitors air consumption, system pressure and flow, as well as offering a suite of diagnostic tools. And rather than just tallying overall consumption, it can provide a detailed look at air consumption associated with up to 16 different process sequences and machine states.

The Energy Monitoring System also records and stores an optimized set of reference conditions, comparing them with actual operating conditions in real time and triggering alarms if necessary. The system can also be used as an up-front design tool, one that allows machine builders to calculate pressure, flow and air consumption in advance of building the finished machine.

What sets the system apart from other methods of monitoring the condition of pneumatic systems is its plug-and-play nature, according to Sachin Kambli, a sensors product specialist for Festo. “Nobody wants to run wires and program controllers for condition monitoring,” he says. With this system, though, the smart sensors in essence configure themselves. The only installation work involves putting a pressure and flow sensor in the supply line of the machine.

Kambli estimates condition monitoring can save 20 to 40 percent of the energy costs associated with pneumatic systems in packaging, semiconductor and other types of common production machines. And he’s see even greater savings — up to 55 percent — in specific applications. For more information, go to http://rbi.ims.ca/5724-574.

—Joseph Ogando