

5 Ways the TDK500 Auto Gauge Air Ring Adds Value for Blown Film Producers

Advanced gauge control systems play a crucial role in improving blown film production in several ways:

1. **Sustainable Production:** Accurate gauge control reduces material usage in blown film production. By precisely controlling film thickness uniformity, manufacturers reduce the resin consumption traditionally required to ensure that minimum thickness is guaranteed.
2. **Flatter Film:** InstaGauge uses sophisticated sensors and feedback mechanisms to monitor and adjust the film thickness continuously, ensuring flatter film. By minimizing thickness variations, manufacturers can achieve higher product quality and meet tighter tolerance requirements while also avoiding issues such as uneven sealing or poor printability. This, in turn, enhances the performance and aesthetics of the final product, meeting customer expectations.
3. **More Production Hours Per Day:** the InstaGauge name is a nod to how quickly the unit achieves target thickness with at least a 50% reduction in gauge variation. In as little as 5-7 minutes, operators are in saleable production. That is less time and resin lost to out of spec material, and bonus time producing saleable product. Lower lip lock is greatly simplified with the TDK, which translates into less training, and faster start-ups.
4. **Process Stability:** InstaGauge provides better process stability by compensating for external factors that can impact film thickness variation, such as die gap variation or ambient temperature. By auto-adjusting parameters, the system maintains stable production conditions, reducing the risk of defects and ensuring reliable and repeatable results. Additionally, operators can visualize and analyze key production parameters, such as film thickness profiles, trends, or statistical data. This information helps identify process variations, optimize settings, and make data-driven decisions for process improvements.

In conjunction with gauge control, advanced process stability can be achieved with the integration of the DRJ 3rd Generation IBC Control System. Precision width control with the IBC, especially when paired with the Automatic Layflat Calibration system offers width stability. This improves sustainability marks by reducing edge trim from a tighter control of layflat. Drilling down on width control helps you only produce what is required for the job, meaning less wasted resin.

Finally, Eurochiller direct air chilling systems can feed both systems with cooling air that is finely regulated to +/- .1°C (.2°F). This added level of cooling stability improves width and gauge control, lowering your bottom line. Additionally, the systems notable energy savings (vs cooling coils) reduce electricity costs and water consumption for this process cooling.

5. **Production Flexibility:** The TDK500's modular construction allows for fast and simple lip set swaps to expand the range of blow-up ratios that the unit will support. This versatility allows for greater production flexibility and the ability to meet diverse market demands on one line, with one air ring.

Want to learn more? See how the TDK500 InstaGauge™ achieves these objectives, and learn what sets it apart from the rest: <https://www.drjosephinc.com/automatic-air-ring-tdk500/>