

# Enhancing Operational Efficiency in Drum Rotation Systems in Asphalt Production Facilities

*Climax Keyless Locking Assemblies provide an alternative method for assembling rotary trunnions in asphalt plants, replacing traditional sweat-fit techniques with a more serviceable and mechanically efficient solutions.*



## The KLD Advantage:

- Eliminate keys, keyways, & set screws prone to shaft damage & fretting corrosion
- Superior to splines which are susceptible to fretting & require expensive machining
- When shrink fits or press fits are difficult to install & remove
- KLDs require only simple hand tools for installation & removal
- KLDs transmit high torque, thrust, & bending loads

Asphalt production facilities utilize a series of trunnion assemblies to support and rotate drums containing heated asphalt mix. Traditionally, trunnion wheels are either machined from a single forged steel billet to exact dimensions or, more commonly, made using a "sweat fit" configuration. Using this "sweat fit" method, the axle is fitted between dual bearings and the mounted wheel, creating a rigid but maintenance-intensive assembly.

In the event of bearing failure or tire wear, the entire assembly requires disassembly for service. Due to the complexities of a sweat fit, separating the axle from the wheel is often difficult, necessitating elevated temperatures and the use of high-tonnage hydraulic presses, resulting in extended downtime and increased labor costs.

Extended downtime often impacts productivity, prompting management to seek a more efficient solution. Climax Series C405 Heavy-Duty Keyless Locking Assemblies offer a superior alternative by replicating the performance of traditional interference fits while allowing for a straightforward installation using standard hand tools. In addition, C405s allow for quick disassembly and component replacement, such as damaged shafts or wheels, without specialized equipment.

Unlike sweat-fit assemblies, the C405 requires only a straight bore with common surface finishes and generous tolerances. When installed between the shaft and component bore, locking assemblies reliably transmit high torque, axial thrust, and bending loads making them ideal for heavy-duty applications.

Climax Metal Products can tailor products to fit precise application needs. Our experienced in-house engineers are ready to work together, designing a custom solution that fits your exact application needs.

