

Keyless Locking Devices Provide Solution for Steel Mill Gearbox Applications

Climax Keyless Locking Devices provide steel mills with a cost-effective and low-maintenance alternative to traditional gearbox mounting methods improving efficiency and reducing long-term maintenance costs.



In the steel industry, gearboxes that drive mills are typically coupled to motors using large gear couplings. Traditionally, these couplings are mounted using a heavy interference fit, which requires expensive close-tolerance machining. The installation and removal processes necessitate heating the hub, as well as using a press or puller. This method not only demands significant time and effort but also poses risks to the equipment. Heated hubs can cause seal damage and lead to premature bearing failure. Likewise, when bearing maintenance is necessary, the removal and reinstallation of these couplings becomes labor-intensive and costly.

By incorporating a Climax Shrink Disc, steel mills can bypass these issues. Shrink discs offer a simple and superior alternative that eliminates the need for interference fits, heated hubs, and specialized tools. Climax Keyless Locking Devices and Shrink Discs, provide higher torque, bending and axial thrust capacities, ensuring a reliable performance. The elimination of axial movement during installation enhances precision and stability in the application. KLDs remove notch factors associated with keyways while reducing stress concentrations and potential failure points.

For Rotating Applications:

- Keys, keyways, and set screws are prone to shaft damage and fretting corrosion
- Shrink or press fits are difficult to install and remove
- Transmit high torque, thrust, and bending loads
- Requires only the use of simple hand tools for installation and removal

The installation and removal of KLDs are straightforward, requiring only simple hand tools. This ease of use facilitates efficient field serviceability, minimizing downtime and maintenance costs. Overall, Climax KLDs enhance operational efficiency and reliability while offering a user friendly solution for installation and maintenance.

Climax has an extensive line of Keyless Locking Devices available from stock and has the ability to engineer custom designs. Contact us to learn more about how we can provide quality-engineered shaft locking solutions.

