

## Automatic Roll Change Sled or Turntable Jarret Shock Absorber Application

### Product Overview

Automatic roll change systems may use a traversing sled on a rotating turntable for handling the roll stack. The sled moves in and out of the position on tracks and may use end stops to limit the travel. Turntables rotate to line up sets of tracks on the turntable with a fixed set of tracks in the floor that are used to move rolls in and out of the mill. The turntable uses a gear drive and end stops to accurately align the tracks in the turntable with the tracks in the floor.

### Product Solution

Fixed end stops provide no cushioning and cause the drive to lock up and fail, especially with the high reduction gears used in turntables.

The combination of the low operating speed of these devices and the potential for power-on impacts makes hydraulic shock absorbers as ineffective as solid stops. A shock absorbing end-stop is needed that will stop the sled or turntable and minimize the overload potential to the drive. A shock absorber that has an increasing reaction with stroke is needed for this application.

### Application Opportunity

The Jarret elastomeric shock absorber has a progressively increasing reaction with respect stroke so that, as the bumper is compressed, a point is reached where the bumper reaction equals and then exceeds the force of the drive system. This allows the remaining stroke of the bumper to absorb kinetic energy. If the bumper is properly selected, both the kinetic and potential energy will be absorbed before the bumper reaches its maximum stroke resulting in a smooth progressive stop with no sudden jarring.

In addition, the JARRET units will maintain full integrity of the seals (and therefore remain functional), even if the shock absorber is not stroked for long periods of time. This differs from a hydraulic shock absorber whose seals will dry out and crack, thereby failing to maintain the pressure necessary for energy absorption if not stroked regularly to keep the seals moist.

The Jarret units can be mounted on the cars to impact against the end structure or they can be mounted on the end stop structure that the car impacts.

An inventory of standard sizes provides ready availability for most applications. A repair facility is available to recondition worn units if required, thus assuring long economical service.

