

Power Transmission Solutions for Geared Grinding



Bibby Turboflex • Twiflex • Wichita Clutch



ALTRA MOTION PROVIDES POWER TRANSMISSION SOLUTIONS FOR UNDERGROUND MINING, SURFACE MINING, AND PROCESSING APPLICATIONS

The industry-leading global brands of Altra Motion provide rugged power transmission components to meet the most demanding challenges of mine and quarry applications. Altra offers a full range of drivetrain solutions including heavy-duty clutches & brakes, engineered couplings, holdbacks & backstopping clutches, heavy-duty speed reducers, gear motors, overload clutches, belted and synchronous drives, and torque-limiting devices.

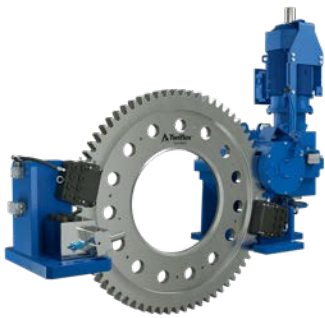
GRINDING MILL SOLUTIONS

Wichita Clutch type SV, grinding mill clutches are specifically designed for mill applications and are the product of choice on geared mills. The high-heat dissipation clutches enable smooth starts and a means to disconnect the prime mover from the main drive. Units are equipped with a driving adapter that is designed to allow the clutch to be used in a shaft-to-shaft or through-shaft coupling arrangement. A quick-change feature enables replacement of any wearing clutch part without disturbing either shaft.

High-capacity gear and grid couplings from Bibby Turboflex used on geared mills to connect the motor to the speed reducer and the gear drive to the pinion gear. Bibby torque-limiting modules are tamper-proof and are designed to be integrated into many types of grinding mill and HPGR systems.

Twiflex caliper disc brakes are installed on geared mill drive systems to provide emergency stop and holding capability and permit inching of the mill to a neutral position. In high-pressure grinding roll applications, Twiflex provides an integrated turning and locking system, with the associated controls, to facilitate secure mill maintenance.

www.AltraMining.com



Turning, Locking and Braking Systems

Twiflex

Integrated shaft turning and braking system with locking device. Turning torques in excess of 334,850 lb-ft. Braking and locking torques up to 635,780 lb-ft based on the standard range. Optional local controls and split drive gear/disc.



Modular Torque Limiters

Bibby Turboflex

Capable of providing virtually unlimited overload-release torque capacity the Bibby modular torque limiter design may be incorporated into any drive coupling arrangement for the optimal package solution. Typically installed on grinding mills and high-pressure grinding rolls, individual modules can be supplied to be integrated in customers' own drive design.



Grinding Mill Clutches

Wichita Clutch

Wichita air-applied grinding mill clutches are specially designed to provide smooth starts with limited current surge on heavy-duty geared grinding mills with large inertia loads. The clutches are typically positioned on the mill's pinion shaft drive ring gear. The Wichita SV models also utilise a special high energy absorbing, high-coefficient friction material for greater heat dissipation during mill jogging and inching operations.

The Wichita Clutch air-tube design combines all the best features of a disc type clutch with all the advantages of direct air engagement. It is the simplest and most trouble-free method of applying air pressure yet designed.

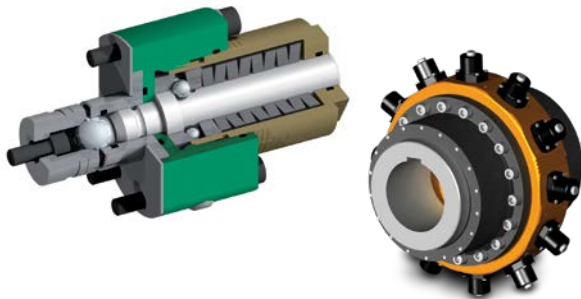


Wichita 'SV' grinding mill clutches

Grinding Mill Clutches

Wichita Clutch

- No adjustment or lubrication required
- Highly stable torque capacity unaffected by centrifugal forces
- High heat capacity for jogging/inching
- Multi-plate designs up to 1500 mm diameter for high torque applications

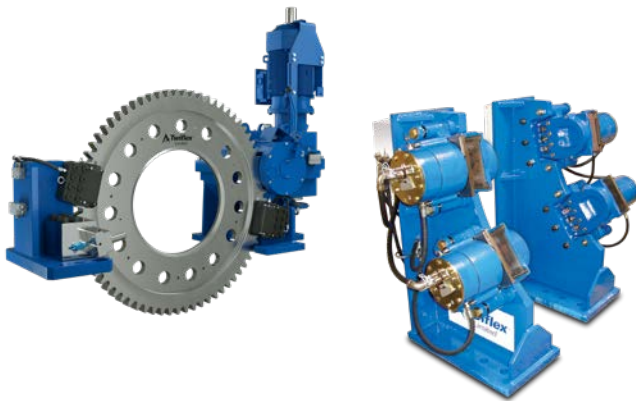


Bibby torque limiting module and assembly

Modular Torque Limiters

Bibby Turboflex

- Highly accurate and repeatable release torque
- Quick and simple manual re-engagement
- Low maintenance burden
- Factory pre-set modules
- Individual modules are removable should recalibration be needed
- Versatile mounting options



Twiflex 'TLB' and grinding mill brake stand

Turning, Locking and Braking Systems

Twiflex

- Integrated turning, locking and braking functions
- Pin locking and tooth locking designs
- Split gearwheel options to facilitate retro-fits
- Robust and compact floating caliper solutions minimise space claim

HPGR Drive Solutions

Combining the convenience of the Twiflex turning and locking systems with the flexibility of the Bibby modular torque limiter design, has enabled Altra to offer a unique, integrated, drive package for high-pressure grinding rolls.

A compact turning gear provides low-speed rotation in either direction allowing precise positioning of the rolls for maintenance, while a monitored tooth-locking mechanism prevents unintended rotation when static.

The Bibby torque limiting modules are incorporated into the ring gear to minimize the overall space claim and protect the drive-train from excessive torsional loads.



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