

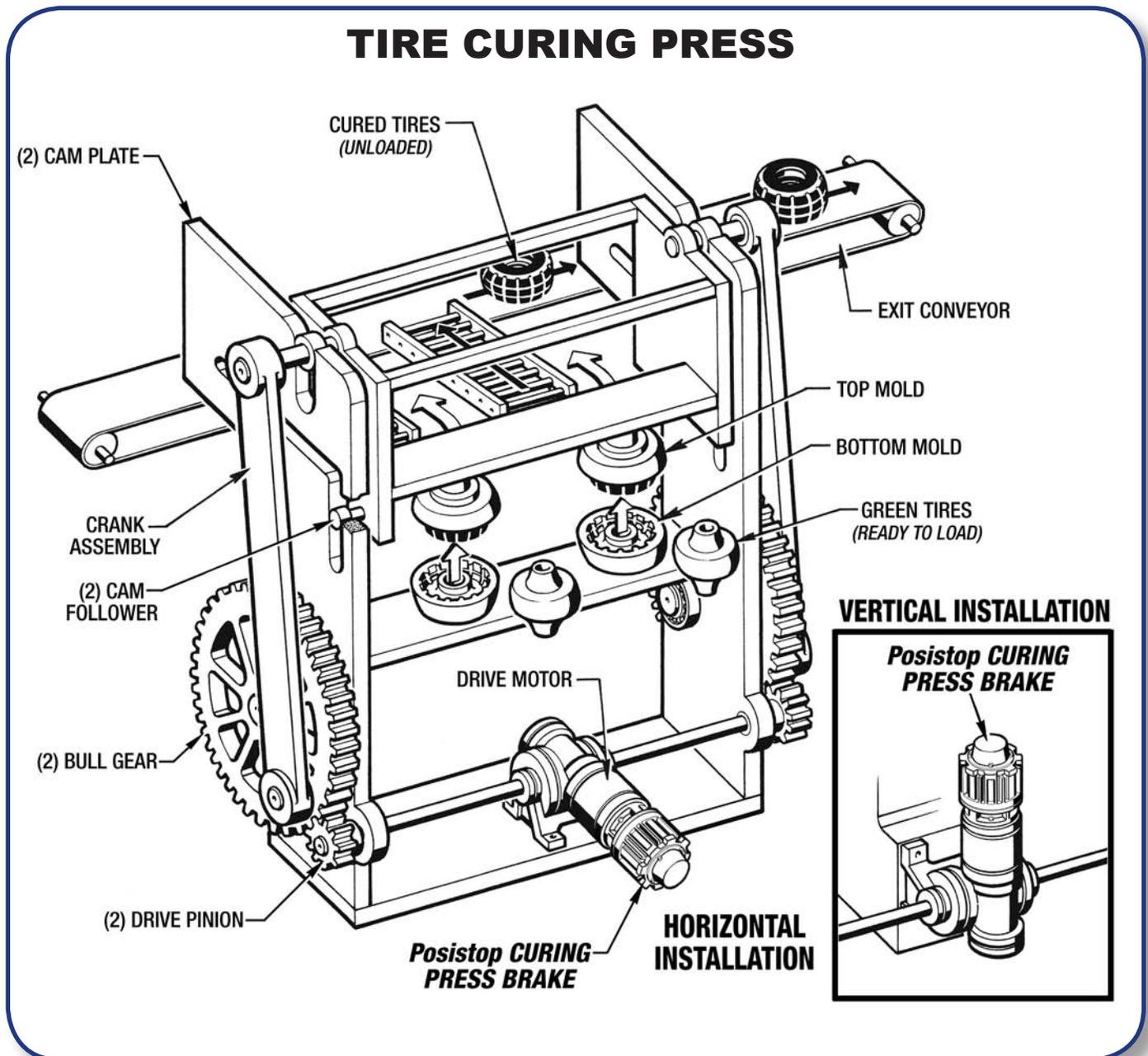
APPLICATION BULLETIN



APPLICATION: Tire Curing Press

INDUSTRY: Tire Plants

PRODUCT: Posistop Curing Press Brake



TIRE CURING PRESS

WHERE THEY ARE USED: The curing press is used in tire manufacturing plants that produce consumer tires. The curing press is where the tire gets its final shape and treads pattern. Hot molds, similar to a giant waffle iron, shapes and vulcanize the tire. The molds are engraved with the tread pattern, and the sidewall markings, as required by law. The green tire is cured at over 300 degrees for 12 to 25 minutes. The curing press mold is opened and closed via hydraulic or electro-mechanical devices.

HOW THEY WORK: On the Electro-mechanical presses, a brake motor drives a gearbox that turns a large bull gear that rotates a cam which is linked to the top half of the press mold. The cam rotates 180 degrees from full open to full closed position. The cam reverses rotation with each open or closed motion. The purpose of the motor mounted brake is to provide a positive means of stopping the mold in either its open or closed position. The closed position is more critical. The mold needs to close with the cam at bottom dead center. If the cam over shoots, or under shoots, damage can occur. In some cases, the mold is damaged, and the press needs to be manually opened using a high-powered wrench.

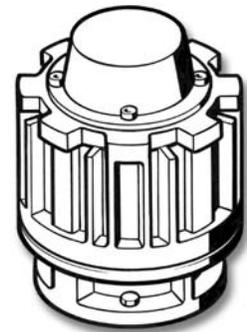
PROBLEM SOLVED: The existing brakes are dry friction, electrical release, spring set. The brakes are located in a hot, steamy environment. The brakes are not sealed therefore suffer from corrosion and contamination. Constantly reversing direction damages the internal parts of the existing brakes. The existing brakes require a lot of maintenance. If the brake slips during the curing process, a sub-standard tire will be produced.

The Force Control **Posistop** brake is multiple discs, is totally enclosed, oil filled and sealed. The brake is air released and spring set. The oil inside the brake shears to transmit torque while in the dynamic state, along with removing heat from the brake stack. The oil also lubricates all moving parts to prevent wear and corrosion. The multiple friction discs design is high torque with low inertia.

IMPORTANT FEATURES:

The Posistop brake will reduce maintenance and provide very long service life.

- Totally enclosed design prevents contamination and corrosion
- Heavy-duty housing combined with precision machined parts guarantee performance - which translates into more top quality tires.
- Self-adjusting and maintenance free.
- Single piston design eliminates small linkages that can hang up or break under heavy use.
- Easy retrofit on existing machinery.



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