



## Product

## 1CD Series Brake

## Application

## Bakery Dough Lift

## Highlights

- Electrically-released, spring-set brake mounts as a caliper and clamps to both sides of a flat disc
- 3300 N (741 lbs.) of clamping force
- Brake sized to provide the same torque as the acceleration torque of the gear motor
- An extended shaft was also provided

When a competitor's gearbox failed on a dough lifting system at a Chicago area commercial bakery, the bin transporting 1500 pounds of raw bakery dough dropped more than a dozen feet in an instant. While no one was injured in the incident it was clear that a potential hazard existed.

In the system a gearmotor with hollow shaft output drives the lift mechanism. Since the concern was that another gearing failure would lead to loss of control of the load, a gearmotor with an integrated brake was not the answer; the brake had to be external to the gearmotor.

The bakery contacted Altra Industrial Motion for assistance with selecting the best brake solution for the application. The brake would have to stop and hold the 1500 lb. load in the event the gearmotor output gears were to fail again. Several possible Altra braking choices were reviewed. Ultimately, it was determined that a Matrix 1CD Series brake was the most adaptable and economic solution to meet the challenge.

The electrically-released, spring-set 1CD brake mounts as a caliper and clamps to both sides of a flat disc. The Model 1CD070 provides 3300 N (741 lbs.) of clamping force. To accommodate the brake, an extended shaft was included that engages the lifting mechanism and provides a mounting surface for the brake. The application required 944 ft. lbs. of torque to stop and hold the load. The brake was sized so that it could provide the same torque as the acceleration torque of the gear motor. A single 1CD070 module could be used with a 32 in. diameter disc or a pair of 1CD070s could be used with a 16 in. disc. This application highlights the flexibility of the 1CD series. By changing the friction disc diameter, the torque capacity of the brake can be increased or decreased.

US (Application Assistance)  
**1-800-825-9050**  
matrix-international.com

Europe  
**+44 (0) 1356 602000**

Asia Pacific  
For a list of our AP sales offices:  
altramotion.com/contactus