Cage Guardian™
Safety Brake
Reliable cage-occupant protection
Suspension-failure events should never happen, but if they do, you want a safety brake system that you can count on. Unfortunately, not all safety brakes are up to the task. Wooden guides are subject to moisture and defect issues and have to be immediately replaced after every safety catch event. Add to that the fact that high-quality, consistent timber guides are becoming ever more difficult to obtain, and you're faced with some potentially dangerous and expensive problems.

Introducing the Cage Guardian™ Safety Brake solution from FLSmidth.

Built for control, longevity, reliability and low maintenance, the patent pending Cage Guardian Safety Brake system uses engineered steel guides and a self contained brake path. The end result? A reliable, reusable safety brake system that you can depend on.

**Key benefits**

- **Actuates automatically upon suspension failure**
  Mechanical design ensures that the Cage Guardian Safety Brake system actuates automatically upon slack rope or other suspension failures.

- **Increased durability and reusability**
  Steel guides offer increased durability and reusability in the event of conveyance suspension failure. Simply retrieve the cage for later redeployment.

- **Meets strict mining safety regulations**
  The Cage Guardian Safety Brake solution is designed in accordance with some of the world’s most stringent mine hoist safety regulations.

- **Incorporates multiple redundant mechanical systems**
  Using multiple redundant mechanical systems — free from hydraulic, pneumatic or electrical components relying on external energy sources, the Cage Guardian Safety Brake solution ensures a secure ride for materials and cage occupants.

- **Usable under all personnel conditions**
  Whether the conveyance is carrying a single occupant, a fully loaded cage or anything in between, the Cage Guardian Safety Brake system will always perform optimally.
Superior Safety
Your people put a lot of trust in safety brake systems. FLSmidth makes sure that our systems are worthy of that trust. That’s why we free-fall test every brake before we allow them to be used; every brake we offer is officially documented and certified, so you know that it’s up to the task before you trust it to protect your people. And, in the unlikely event that part of the brake fails, multiple redundant mechanical systems ensure that the conveyance (and everyone it’s carrying) comes to a safe stop. The Cage Guardian Safety Brake system uses a progressively increasing brake force with average deceleration rates of 0.9g to 2g (9 to 20 m/s²) (29.5 to 65.6 ft/s²), meaning cage occupants are significantly less likely to experience the kinds of injuries that come from sudden stops.

Reduced maintenance and repair costs
Occupants should be your primary concern during suspension failure events. But your equipment and infrastructure is often at risk as well. Traditional safety catch systems can incur some serious damage, and when coupled with the day-to-day wear and corrosion of the mine-shaft environment, mining companies often end up spending significant amounts on safety catch repair and maintenance.

By employing engineered steel guides, the Cage Guardian Safety Brake system offers durability unmatched by safety catches and timber guides. And when slack-rope and rope-break events do occur, components are designed to deploy without taking any damage; simply retrieve the cage back to surface, inspect, and reset the brake in preparation for any further event(s). Durable and reusable, the Cage Guardian Safety Brake solution provides a cost-effective alternative to traditional safety brake repair and maintenance expenses.

Reliable mechanical design
You shouldn’t have to depend on outside power sources to keep your people protected. The Cage Guardian Safety Brake system is completely mechanical. In the event of suspension failure, the weight of the cage itself causes the safety brake to actuate, holding the cage securely in place to await retrieval. There are no hydraulic, pneumatic or electrical components in the brakes themselves, and no external energy source is required.

This mechanical design not only allows for effective braking under all conditions, it also averts the risk of malfunction commonly associated with hydraulic and pneumatic components. This means a more secure system overall, as well as fewer repair costs for your business.
Bringing better solutions to light

in the cement and mining industries

The future is full of possibilities and you are leading the way. But it’s never a straight journey and it’s easy to lose sight of true potential. With an ally by your side who shares your ambitions and who sees your world from different angles, we will find the right way together.

For more than 135 years, we have challenged conventions and explored opportunities. Across more than 50 countries, we are 13,000 employees who combine our unique process-knowledge on projects, products and services to drive success. We develop the most advanced technology in our industries and offer market-leading product and service ranges.

Rooted in Danish values, we employ our knowledge and experience to navigate your complexity and bring better solutions to light. So no matter where in the world you are, we are here to help you discover new ground and achieve sustainable productivity enhancement.

We are the market-leading supplier of engineering, equipment and service solutions to customers in the global mining and cement industries.

We discover potential.