

Application Story

"MONTY, I'LL TAKE WHAT'S BEHIND CURTAIN #3"

Curtains and blinds help our homes create a more comfortable living space. They can be found in most households in one form or another. The basic roles of curtains are to provide privacy, adjust light coming in from a window and temperature insulation. Another role of curtains, which is less of a priority when purchasing them, is crime prevention. At night, curtains prevent would-be thieves from easily determining if anybody is at home and in the daytime, sheer curtains can do the same. In both summer and winter, curtains provide insulation and help to block sunshine. Curtains can also absorb and reduce noise which is why you find thick noise dampening curtains in hotel rooms.

In luxurious hotels and high-end homes with very tall windows, motorized curtain control is common. With a click of a button, curtains can be easily opened or closed. It is in some of these applications where you will find both Ogura clutches and brakes. In standard vertical electric curtains, a motor and speed reducer are used to both open and close curtains controlled by a hand held remote. When power is applied, the clutch engages, the motor reducer drives through the clutch to drive the curtain control rod. When power is not applied, the clutch is disengaged so the curtain can be pulled open or closed manually. Without the clutch, it could be extremely difficult to try to back drive the reducer and motor, and the force required would cause damage to the curtain. Also, without a clutch, the curtain could not be opened or closed if a power failure were to occur.

In horizontal or angled curtains, when the motor and gearbox stop driving, the weight may start to slowly backdrive the gearbox and motor so the curtain would no longer hold its position. In these types of applications, a spring applied holding brake is used to hold the curtain control rod in place. When switched on, power goes immediately to the motor mounted brake releasing the brake and allowing the motor to turn either clockwise or counterclockwise.

When electrical power is turned off, the motor rapidly decelerates and the brake coil degrades allowing the springs to engage the brake disc which is attached to the motor shaft.

Besides curtains, Ogura micro clutches are also used in door closers, door locks, rolling shutter doors and gates to help open, close or hold in place.●



Ogura clutches and brakes help control motorized curtains



Ogura MIC clutches



Ogura MCNB brake