OPEN THE DOOR TO ENERGY EFFICIENCY

Minimizing energy costs with bi-fold and hydraulic doors

By Jason Myrvik, Midland Door Solutions

Doors are exposed to many elements, so it's important to inspect them regularly to ensure energy savings year after year.

Hydraulic and bi-fold doors are among the most convenient and necessary features of many buildings. They allow us to quickly and easily load and unload bulk materials, and they provide access in and out of buildings that contain large and oversized equipment.

Unfortunately, with large doors there is often a risk of energy loss and increased heating and cooling costs. Whether you require a new door for an educational building or a replacement unit for a manufacturing facility, you should choose a door that's built and installed with energy efficiency in mind; it will not only minimize costs but also will last longer.

Choose the right door

When looking for a hydraulic or bi-fold door, you'll see that most, if not all, include customized options. These details are the most critical features to consider during the door selection process. Just like the windows in a house, a bi-fold or hydraulic door that is sized precisely for the opening it's intended to fit will be one of your best lines of defense against energy loss.

Be sure you work with a conscientious manufacturer that is involved in the designing, building, and installing of the door, from the beginning of the project to the end. That will ensure they understand the needs of the facility and your expectations for the project.

For example, if temperature fluctuations are an issue because of the door's proximity to sensitive materials, a swing-open hydraulic door with a fast open-and-close time would be more appropriate for the job than a bi-fold door.

However, some manufacturers of bi-fold doors offer variable frequency drives (VFDs) that decrease the open-and-close cycle times for the door by as much as 30%. Some VFDs also convert single-phase power into three-phase power. This is more economical because it doesn't require as much conductor material.

Consider insulation

In addition to selecting a door that takes minimal time to open and close, a properly insulated door can also have a big impact on controlling energy loss. Consider insulation options and choose the one that is appropriate for the climate and building needs.

Work with a manufacturer to find the best-rated insulation for the climate. Insulation materials such as white-faced blanket and board and spray foam vary in cost and ratings. When considering windows, be sure to look for insulated glass options to maximize efficiency.

Make energy-efficient choices

A malfunction or broken part on a door can have a big impact on a facility's production, especially in the dead of winter. A door that is solid, durable, and built with quality components ensures optimal performance and contributes to energy efficiency day after day.

All-steel designs provide greater stability than doors made with wood and steel. Heavy-gauge steel tubing and jig-welded construction are ideal for enhancing door durability and dependability.

During replacement projects, you can expedite the installation process and minimize heating and cooling costs by working with a manufacturer that fabricates the doors offsite and delivers the materials to the site before the project. This will ensure a quick and smooth installation.

Don't forget about maintenance

Doors are exposed to the elements, so it's important to inspect them regularly, especially before winter, to ensure energy savings for years to come. Examine the seals and weather stripping, because these parts connect the ground and the building and are a door's only defense against air infiltration.

Minimizing energy loss and costs can be challenging in buildings that require large openings. Knowing the ins and outs of installation and design will open the door to efficiencies and savings. ■

Jason Myrvik is the general manager at Midland Door Solutions, which manufactures and installs bi-fold and hydraulic doors for new and existing buildings. He has more than 19 years of industry experience. Jason@MidlandDoorSolutions.com