

Choosing Stainless Steel Bi-fold Door Frames

STAINLESS STEEL DOOR FRAMES ARE the top choice for livestock barns and other corrosive environments. As a builder or installer, you are dedicated to providing customers with the best quality product. Installing a commercial-sized door on a new or existing building can be a considerable investment for customers. Choosing the right product can ensure long-term satisfaction with their building.

Commercial bi-fold doors consist of two pieces of steel frame joined together by industrial hinges. Installed to the exterior of the building, the door lifts upward and folds in half, using minimal space in front of the building to operate and leaving maximum headroom inside.

The bi-fold door frame is exposed on the inside of the building, which leaves the steel susceptible to rust and deterioration in corrosive environments. To combat this, a stainless-steel frame is used, improving the durability and longevity of the door.

A STRONGER DOOR

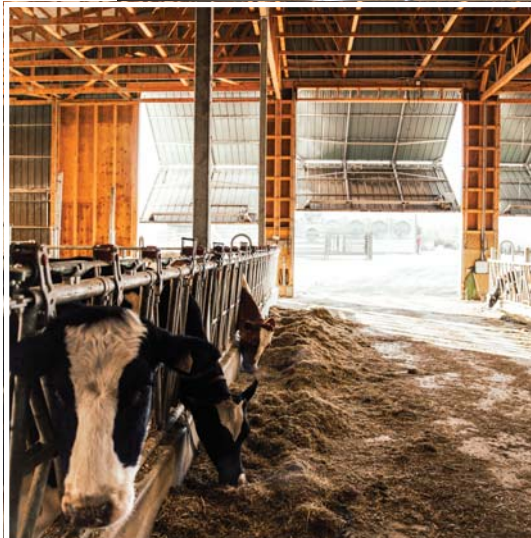
According to Samantha Wiebe, a Diamond Doors representative, stainless steel frames are the recommended option for corrosive environments because they resist rust and cracking.

Diamond Doors [<https://diamonddoors.com/>] has been manufacturing bi-fold doors since 1998, and they have seen the effect of using regular steel when stainless has been recommended. “The door needs replacing two years later. Rust and cracking result in multiple repairs. This is why it is important for the door to be suited to the project, to increase door lifespan and functionality,” says Wiebe.

Stainless steel is a combination of materials including iron, chromium, nickel,



PHOTOS COURTESY OF DIAMOND DOORS



and other alloys. The percentage of each material is dependant on the grade of stainless steel used in manufacturing, but 304 grade stainless steel is popular for door frames.

This is because it has a low thermal conductivity, improving heat retention in the building. An improved surface finish helps the steel resist cracking and increases its overall strength.

The added chromium protects against rust by oxidizing on the surface, creating a corrosion-resistant barrier between the metal and the air.

Finally, with a maximum tensile strength of about 89 900 psi, which is higher than a regular steel frame, a stainless-steel door frame has better resistance to high winds.

IT'S NOT ABOUT LOOKS

While rust is unsightly and leaves the door looking aged, it's not just the appearance of the door that is of concern.

product feature

A regular steel frame deteriorates quickly when faced with high humidity or acidic environments, reducing the lifespan of the door.

These environments cause rust, pitting, and other damage, which decreases the structural integrity of the door frame and creates a potentially dangerous situation. In comparison, a stainless steel frame is much stronger when faced with these conditions.

DOOR APPLICATIONS

There are a wide variety of uses for stainless steel door frames, particularly in the agricultural industry. Livestock barns, poultry barns, and pig barns are all highly corrosive and humid. These environments are tough on regular steel, which makes stainless steel doors an ideal choice.

Vegetable storage buildings, equipment wash bays, and marinas are all applications where a stainless steel bi-fold door would be recommended.

ADDED BENEFITS

Like every other bi-fold door, stainless steel frames come fully equipped with industry standard features.

These features include safety sensors, which protect against accidental closures on equipment or personnel. Bi-fold doors also have an improved insulation rating, resulting in better protection against harsh weather and extreme temperatures.



Their locking systems improve the seal between the door and the building, and a large clear opening leaves more room for storage inside.

Select bi-fold door companies also offer an entire package with the stainless steel door frame, including stainless steel hinges, hinge pins, and lift cables. This ensures that every part of the door is long-lasting and functional. At Diamond Doors, they also include a stainless steel, sealed motor. "This provides assurance of the door's operation in the harshest environments," Wiebe says.

The benefits of a bi-fold door, coupled with the strength and durability of a stainless steel door frame, are compelling.

SOLUTION FOR EVERY NEED

A more durable frame means less maintenance and more convenience.

There is no need to refinish the door frame with paint and primer. The higher tensile strength of stainless steel provides better protection in windy locations, and the longer lifespan of the door makes the purchase of the door a wise investment.

Stainless steel bi-fold door frames offer increased longevity and strength when compared to standard door frames. Highly suited for corrosive environments, a stainless steel frame is a recommended choice for livestock and poultry barns, wash bays, and vegetable storage. **RB**

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