

Kick and Impact Plates VS Spring Bumpers

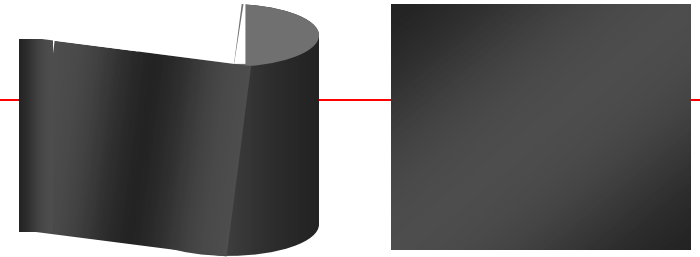
Why is the recommended protection for ColdSwing different than what has been traditionally used on traffic doors? *It's actually very simple. The reason is the difference in the type of hinge and the way it works.*

- A spring bumper provides the additional acceleration energy to help a gravity-style hinge work effectively.
- A no-rise, horizontal cam hinge does not require the additional acceleration force, negating the need for spring bumpers.
- Both bumpers and plates provide impact protection.
- Impact plates do not project into the doorway allowing for maximum opening width.

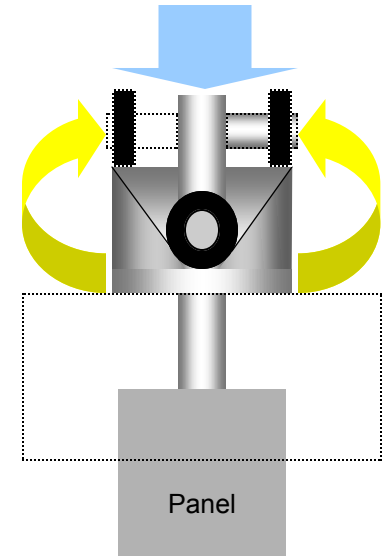
When pushed to open, a V-Cam causes the door to rise up as it turns to open and then uses gravity to bring the door back down and hold it in its closed position.

The entire weight of the door is concentrated on the roller bearing which sits in the bottom of the V when the door is closed. It needs a good push or impact to break the force of gravity and get the roller bearing to move up the ramp to the open position. This is where the spring bumper comes into play. The “spring” in a spring bumper is what assists a V-Cam hinge - especially with larger, heavier doors. It creates more accelerated energy to get the door to the open position and provides protection for the door. That’s why it’s called a “spring bumper”.

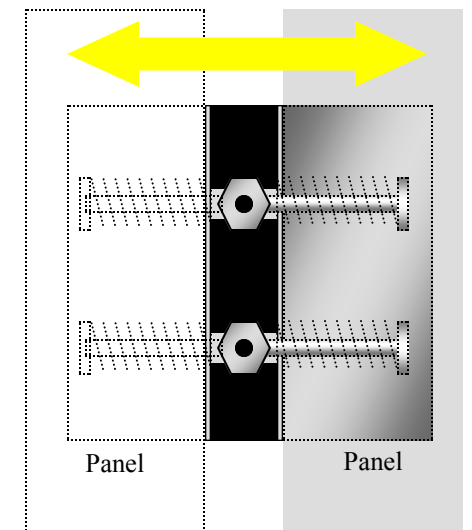
The ColdSwing hinge uses spring tension and a horizontal cam surface which, while holding the door firmly in its closed position, easily slides side to side along the cam with much less force than is required to open the V-Cam. It does not fight gravity or the weight of the panel because the weight is not concentrated at one point. The “spring” from a spring bumper is not required, so a kick or impact plate for protection is all that is needed. ColdSwing doors offer the highest quality, 18 gauge stainless steel kick plate or 1/4” thick, full height, high density polyethylene impact plates as a standard. Others use less robust stainless steel materials, higher gauges and plastic kick plates as thin as 1/8”.



**Traditional
V-Cam Style Hinge**



**ColdSwing
No-Rise Hinge**

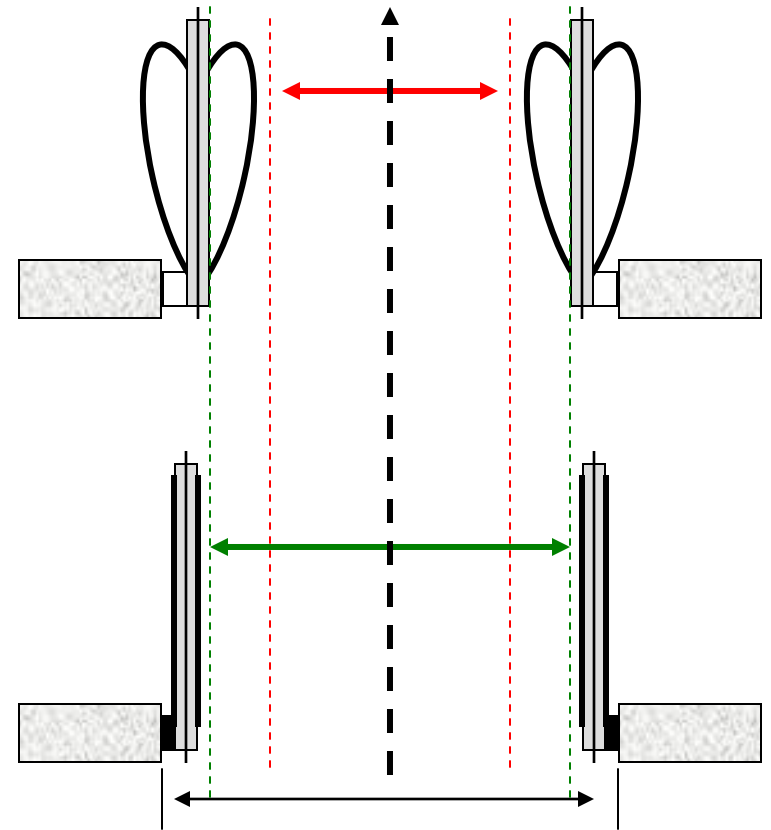


Most spring bumpers are primarily made of ABS or a variety of polyethylene materials. When made from an extruded sheet stock, a secondary process uses heat to form the curl on the front edge. Molded varieties eliminate the secondary process which can weaken the material at the curl. The issue with molded bumpers is the bumpers tend to vary in thickness. Both processes have detrimental effects on performance and lifespan. A spring bumper is attached by a series of mechanical fasteners at the front curl and rear tail. Any impact is transferred to the door panel only at these points. This puts a large amount of stress on a small area. The spring of the bumper is established while attaching it to the panel under tension, this is known as "loading" the bumper. Anyone who has installed a spring bumper knows how challenging this can be especially when it is a field replacement.

Other added benefits when using kick or impact plates include:

- **Increased usable opening allowing wider loads to pass through the same doorway.**
- **Impact absorption is spread over a wider area.**
- **Fast and easy replacement when needed.**

Better impact protection and wider useable openings are why ColdSwing kick or impact plates will give you outstanding value in a double acting cold storage door.



The New **American Standard** in Double-Acting Cold Storage Doors

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