

WASTE CONTAINMENT

BEAR PROOF (RESISTENT) CRITERIA (Maximum Bear Resistance)

Bear-proof (resistant) infrastructure is one of the main keys to preventing human-bear conflict. There has been extensive research done on what constitutes a bear-resistant waste container. For optimal bear-proof (resistant) quality and performance, local Sheet Metal Companies should adhere to the specific criteria which has proven to keep bears out (see list below).

A note of caution: studies show that any kind of secondary latching mechanism on commercial or residential containers lends to human complacency. Surveys show that less than 50 % of all containers that require a padlock, carabineer or bar do not get re-locked. Containers must be self-latching to be completely bear-resistant.

Often, waste disposal contract companies try to modify existing containers to be bear-proof (resistant) – mostly because it is the cheapest alternative. Eventually, these modifications will fail in a bear's attempt to gain access to any kind of waste container; and we all know that bears are opportunistic and stalwart. It usually never pays to jerry-rig commercial or residential waste containers in areas of high human-bear conflict.

The design and efficiency of the self latch mechanism on any man door is key to keeping bears out. When recommending a bear-proof (resistant) waste container, be aware of the financial sensitivities to commercial enterprises if they purchase or lease commercial containers that fail, especially if they are subject to fines for non-compliance under municipal waste management bylaws.

The following are guidelines for bear-proof (resistant) containers and enclosures. They are based on years of experience and extensive testing.

CONTAINERS:

1. All latches used on loading and emptying doors must be self-closing. There should be no secondary step required to secure the doors.
2. Reinforced surfaces are necessary in case bears apply force from pushing or jumping.
3. All containers should be handicap accessible. There are specific guidelines for this in the US.
4. Gaps should be kept a maximum width of ¼". This will prevent bears from getting a firm claw grip and will also prevent rodents from entering the container.
5. Water should drain away from the container's interior.
6. All containers must have provisions for bolting firmly to a hard surface.
7. Container surface should never overlap. Instead, doors should recess into the container body. Overlapping surfaces provide bears a place to grab.
8. Do not rely on gravity to re-latch container doors. Latch hardware should be spring-loaded.

9. Latches should be designed with consideration to the abilities of all sizes of bears. The latch hood must be sized properly. A deflector plate must be set near the latch opening so small bears cannot slide their paw in. The actuation lever must be properly recessed out of the reach of adult claw tips. The force required to operate the latch must be less than 5 lbs. The inside of the door must have a protective plate covering the latch to ensure consistent function.
10. All latches, hinges and handles are made of stainless steel or zinc plated steel. The housing and doors are fabricated of rust-resistant 12, 14, and 16 gauge galvanealed steel. The receptacle is finished inside and out with powder coating. The finish is resistant to humidity, salt spray, fog, ultraviolet light, abrasion and chemicals. The receptacle is assembled with ¼” rivets and welds.

ENCLOSURES:

1. Structure must be of sufficient size to allow for bin removal and emptying as well as placement of recycling containers.
2. Foundation of structure must be at least 300 -600mm concrete upstand.
3. Exterior of structure must be made of split face block or hardy plank nailed to ¾” plywood backing with 3 ¼” nails with a minimum gap between sheets and no gap between door and foundation.
4. Must have two separate entrances, one for personnel and a service door.
5. Service doors must be constructed of 18 gauge steel and be either a garage door style or hinged with no latches or opening mechanisms located on the exterior. Doors must be installed with a minimum gap on tracks and latches on both sides to prevent door from being slid sideways and opened.
6. Service doors must have cane bolts together at the top and bottom and if garage style must have cane bolts on both sides.
7. Bumpers may be placed on door openings to prevent damage to building when opened
8. Personnel doors must be construct of 18 gauge steel, have a reinforced window, self closing device, lever opening on interior and turning door knob on exterior.
9. Enclosures must have interior and exterior lighting and bear proof venting.

Any variation from these requirements must be approved by the Building Inspector.

References: These are some folks that you can contact to glean information about the importance of specific criteria and self-latching mechanisms on commercial containers, food storage lockers and residential polycarts.

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