

Hangar Door Specs.
USACE / NAVFAC / AFCESA

UNIFIED FACILITIES GUIDE SPECIFICATIONS

Division 08 – Doors & Windows
SECTION 08342
STEEL SLIDING HANGAR DOORS

SECTION 2.3.6 SAFETY EDGES

Provide fail-safe safety edges on (each edge of each leaf of individually operated doors) (each leading and trailing edge of drive leaves for floating group doors) (the leading edge of the drive leaf of anchored group doors) from 25 mm one inch above the floor to the top of the door leaf. For leaves 300 mm 12 inches thick or less, provide a single run of safety edge the full width of door. For leaves over 300 mm 12 inches thick (including siding,) provide a double run of safety edges spaced to provide the maximum degree of safety in stopping the leaves. For leaves over 300 mm 12 inches thick (including siding) provide a double run of safety edges on the outer edge of each side of the door leaf covering no less than 80% of leaf.

- a. Design: Provide safety edges to provide a minimum of 90 mm 3 1/2 inches of overtravel after actuation until solid resistance is met and door motion comes to a complete stop. If door requires more than 90 mm or 3 1/2 inches to come to a complete stop, provide additional overtravel built into safety edge the distance required for door motion to come to a complete stop. Use electric safety edges.
- b. Specs: Use sensing edges of reinforced polyvinyl chloride cover or other Government-approved material with chemical resistance to diesel and JP-4 fuel, hydraulic fluids, SAE-30 oil and salt water. Use cover that provides hermetic seal for weather and moisture resistant protection of internal foam and contact elements. Internal foam may be polyurethane and/or latex foam per military specification MIL-R-5001, medium density. Use two contact elements separated by perforated foam or other Government-approved materials and design to perform the switching function when the sensing edge encounters an obstruction along any portion of its active length.
- c. Operation: Actuation of the safety edge on leading edge of a group of leaves shall stop movement of the group. Actuation of a safety edge shall lock out the motor control in the direction of travel until reset, but shall permit the door to be reversed away from the obstruction which tripped the safety edge. Safety edges shall be alive only when doors are moving. Safety edges shall be reset by moving doors away from the obstruction. The lower portion of the safety edges to a height of approximately 1500 mm 5 feet shall be independently removable for convenience in servicing or repair. The remainder of the edge may be in one piece up to a maximum of 6000mm 20 feet.

- d. Bumper(s): Each door leaf edge provided with a safety edge shall be protected by a spring type bumper(s). Bumper shall be designed to absorb 150 percent of the door drive force when door is pushed in an emergency. For continuous safety edges, bumpers shall extend to the sides. For sectional safety edges, the bumper can interrupt the safety edge for a distance not greater than 305 mm 12 inches.
- e. Keyed bypass: Provide a keyed bypass to the door controls to render the safety edges in a temporary “repair” mode, if necessary. The door drive shall be restored from its “fail safe” mode by activation of the keyed bypass.

SECTION 2.3.6.1 ELECTRICAL SAFETY EDGES

Connect the safety edge in series with the necessary relays and resistors to make the system complete. The service should not be more than 24 volts and the circuit shall be normally energized so that the malfunction of any of the component parts will make the door inoperative. Wire sensing edges to provide for control reliable 4-wire operation of hangar door so that any power loss to the sensing edges is experienced, then the door shall become inoperable until power is restored and a reset operation is initiated. Install sensing edges to operate through a normally energized relay so that when the sensing edge is compressed the relay contacts shall open. Install relay contacts shall also open if any component in the sensing edge control circuit is broken so as to break continuity. Use 100 volts electrical service to the control circuit. Ensure service to the sensing edge does not exceed a nominal 24 volts. Install a large red indicator light and/or a loud siren, to be simultaneously activated with the actuation of any sensing edge, to indicate the presence of an obstruction.