

Element Designs

Visual Inspection Standards for Aluminum Doors

Objective: To provide inspection techniques and acceptance criteria for Element Designs' aluminum frame doors.

Door and Drawer Front Components

1. Aluminum extruded stiles & rails.
2. Anodized finishes and water-based coatings
3. Various glass, mirror, and other inserts
4. Optional handles and pulls.
5. Optional hinges and hinge plates
6. Various machining additions (hinge bores, flush handle)

Warranty Standards

1. See aluminum frame door technical manual.
 - a. <https://www.element-designs.com/technical/technical-manual-aluminum-frame-cabinet-doors.pdf>

Inspection Environment

1. Lighting

- a. Inspect doors using similar overhead lighting to what will be at the job site.
 - Typically, 80-120 foot-candles
 - 100 foot-candles are typical for the inspection surface.
 - Whenever possible, the light shall be directly overhead.
- b. No flashlights or added light sources should be used in the inspection process.

2. Inspection Conditions

- a. Arm's length is the recommended viewing distance.
- b. Doors should be inspected in a vertical position, mimicking how they will be installed.
- c. Magnification should not be used for inspections.

3. Inspection time

- a. Small doors (less than 48" tall)
 - Fronts, 5 seconds of visual inspection
 - Backs, 3 seconds of visual inspection
- b. Large doors (greater than 48" tall)

- Fronts, 7 seconds of visual inspection
 - Backs, 5 seconds of visual inspection
- c. Doors shall be viewed in a continuous manner, one surface at a time, with the inspector not lingering on any one spot for more than a couple of seconds.

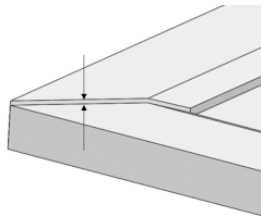
Inspection Definitions and Standard Tolerances

1. Appearance definitions

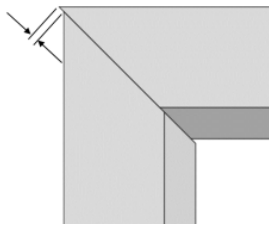
- a. All surfaces (front, back, and edges)

2. Construction Tolerances

- a. Overall door height and width: $\pm 1.0\text{mm}$
- b. Hinge bore locations $\pm 1.0\text{mm}$.
- c. Miter corner tolerance:
- $<.008''$ (0.2 mm) front

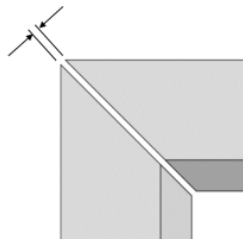


- Shift / Ledge: $<.010''$ (0.25mm)



3. Miter gap

- a. $<.008''$ (0.2 mm) front and $<.025''$ back (0.6 mm)



Definition of a Defect

1. Insignificant defect



- An insignificant defect has a linear length of 2 mm or less.

2. Minor defect



- A minor defect has a linear length of from 3 to 8 mm.
- Minor defect requires attention.
 - Attempt to remove the defect with Magic Eraser or another method.
 - Use a touch-up kit to remove the defect.
 - May require replacement of stile(s) or rail(s)

3. Significant defect



- A defect that has a linear length larger than 8 mm

- Significant defects require attention on all surfaces.
 - Attempt to remove the defect with a Magic Eraser or another method.
 - Use a touch-up kit to remove the defect.
 - Replace the stile(s) or rail(s)

Cosmetic Definitions & Remedies

For stiles and rails where cleaning or touch-up is not a remedy, replacing the defective stile or rail will be the proper remedy. Element Designs will not replace full doors when stiles and rails are the proper remedy. (AF006 and AF010 will require full-door replacements).

1. **Scratches** (Linear marks that catch a fingernail)



a) Cleaning techniques

- **Anodized**
 - New Magic Eraser and household glass cleaner
 - Cleaning process may need to be repeated 2-3 times.
- **Coated**
 - New Magic Eraser and household glass cleaner
 - Follow with a clean, dry microfiber cloth.
 - Cleaning process may need to be repeated one additional time
- **Anodized (Stainless and Natural Aluminum)**
 - If cleaning does not remove the defect and the surface is anodized, replacing the stile or rail will be the remedy.
- **Coated**
 - If cleaning does not remove the defect and the surface is coated, replacing the stile or rail will be the remedy.
 - a. [How to Use Element Designs Touch Up Paint](#)
 - If the scratch cannot be remedied with touch-up paint, the stile or rail may need to be replaced.

2. **Abrasions / Scuffs** (Linear marks on the surface that do not catch a fingernail.
(Dull patches in the paint that do not go through to the base aluminum))



- Use a Magic Eraser to remove abrasion or scuff.
- If the abrasion/scuff cannot be remedied with a Magic Eraser, the stile or rail may need to be replaced.

3. **Chips /Nicks** (Area of the surface that is chipped or missing coating)



- Remedy
 - Use a touch-up kit.
 - [How to Use Element Designs Touch Up Paint](#)

4. **Contamination** (Dirt, lint, or other particles embedded in the surface)



- If the defect cannot be cleaned, replacing the stile or rail will be proper.

5. **Insufficient / Light coating** (Lack of coating thickness)



- Replacing stiles or rails will be the proper remedy.

6. **Warped Door**

- To determine if a door is warped, it should be laid flat on a horizontal surface.
- Tolerance
 - An elevated surface should not exceed 3 mm to be considered acceptable.
- The remedy for this condition is to replace the warped stile or rail.

7. **Glass and Mirror Defects**

- Clean with Magic Eraser and isopropyl alcohol
 - Step two is to clean the glass with a household glass cleaner.
- If the defect cannot be cleaned, replacing the glass will be the remedy.
- [How to Replace Door Inserts](#)