

# 710i Specifications

## A. UNIT FEATURES

1. All doors shall have a continuous extruded knuckle-and-pin hinge that is integral to the #2 and #3 hinge rails as well as the #4 hinge rail and jamb.
2. Full height hinge pins and pin retaining screws shall be stainless steel.
3. All doors shall have a dual durometer deflector mounted to the bottom of panels.
4. Latch to be permanently mounted magnetic strips. These magnets are mounted to the strike, #1 strike rail, #2 hinge rail, and #3 hinge rail.
5. Pull handles to be of extruded aluminum finished to match the unit. Center full length interior pull is an integral part of the #3 hinge rail.
6. Adjustable jambs to provide plus 1/2" and minus 1/8" adjustment on each side of the unit.
7. Unit shall have a bottom-mounted, sealed, ball-bearing roller and extruded aluminum bracket attached to the strike rail to act as a guide during opening and closing.
8. Optional header configuration for barrier free installation.
9. Detailed instruction sheets and cross sections with custom unit fabrication formulas.
10. 24 hour product information and support via the **Alumax Bath Enclosures Website** ([www.alumag.com](http://www.alumag.com)).

## B. UNIT VALIDITY

1. Wet test: All joints, seams, and seals are tested and evaluated for leaks in a wet test module.
2. Mechanical test: Moving parts or components subject to wear are cycle tested to simulate 20 years of use.
3. Artificial aging: Plastic components are selectively tested by artificial aging. This process subjects the parts to ultraviolet light, heat, and humidity to test the resistance of the material to these conditions.
4. Quality: Alumax Bath Enclosures are produced in accordance with procedures specified by ISO 9000.

## **C. MATERIALS AND CONSTRUCTION**

1. Size Limitations:

a. Standard Unit

Maximum allowable width of unit = 36"  
Maximum allowable height of unit = 72"

b. Header Configuration (Barrier Free)

Maximum allowable width of unit = 42"  
Maximum allowable height of unit = 72"

2. Alloy and Temper: Extruded aluminum shall be 6463-T6 alloy per ASTM B 221. This alloy is designed to accept a bright finish after anodizing. Used for decorative trim applications, machineable, polished, and anodized - also heat treatable.

<b>MECHANICAL PROPERTIES OF 6463-T6 (b)</b>					
<b>Thickness in inches (b)</b>	<b>Tensile Strength - ksi</b>				<b>Elongation percent min. in 2 in. or 4D</b>
	<b>Ultimate</b>		<b>Yield</b>		
	<b>min.</b>	<b>max.</b>	<b>min.</b>	<b>max.</b>	
Up thru 0.124	30	..	25.0	..	8
0.125 - 1.000	30	..	25.0	..	10

- a. Hardness of 6463-T6 on Rockwell B scale: 20-50.
- b. T6 temper designates a material that is thermally treated to produce stable tempers then solution heat treated and artificially aged. For complete temper designation consult technical publications ANSI 35.1 or the Aluminum Association publication, Aluminum Standards and Data.
- c. The thickness of the cross-section from which the tension test specimen is taken determines the applicable mechanical properties. The data base and criteria upon which these mechanical property limits are established are outlined in the Aluminum Association publication Aluminum Standards and Data (ASD) section 6, "mechanical Properties".
3. Metal Gauge: The nominal wall thickness of individual aluminum extruded components for this unit varies with structural needs.

<b>Component</b>	<b>Description</b>	<b>Nominal Wall Thickness</b>
SC-552	Strike Jamb	.062"
SC-508	Wall Jamb	.062"
SC-549	#1 Strike Rail	.062"
67361	#2 Hinge Rail	.062"
67368	#3 Hinge Rail	.062"
67224	#4 Hinge Rail	.062"

Component	Description	Nominal Wall Thickness
66769	Hinge Jamb	.062"
67365	Curb	.062"
SC-643	Optional Header	.062" - .094"
SC-907	Optional Curb Fill	.062"

4. Tolerances: Tolerances on all aluminum extruded components shall comply with Aluminum Association requirements unless otherwise specified.
5. Hardware: All hardware parts that are incorporated in the product shall be of aluminum, stainless steel, or other corrosion resistant material(s) compatible with aluminum. Cadmium or zinc-plated parts, where used, shall be in compliance with ASTM A 164-71 or 165-74. Nickel or chrome-plated parts, where used, shall be in compliance with ASTM B 456.71, SC2. Stainless material should have a preference of a 310 alloy with a 410 alternative.
  - a. Fasteners to follow International Fasteners Institute standard B18.6.3 for Slotted and Recessed Head Machine Screws and Metallic Drive Screws or B18.6.4 for Slotted and Recessed Head Tapping Screws and Metallic Drive Screws.

For detailed technical information about stainless steel download the following files from the Alumax Bath Enclosures website at [www.alumag.com](http://www.alumag.com):

STAINLES.ZIP, S\_STEEL.ZIP

- b. Hinge Pin:

Material:	Half Hard Stainless Steel
Pin Dia:	.094"
6. Glazing seals: Vinyls and other glazing seal materials shall be of material compatible with aluminum, be resistant to water and common household chemicals and shall create a water-tight seal between the glass and its surrounding frame.

<b>MECHANICAL PROPERTIES OF 710i GLAZING VINYL Plasticized, filled with Shore A Durometer Hardness of 70</b>	
Tensile Break Strength	920 psi
Ultimate Elongation	600%
Specific Gravity 23/23 C	1.28
Shore "A" Hardness Initial @ 10 sec.	61 58
Brittleness Point, F 50% Failure @	-6

7. Glazing Materials: All glazing materials to be safety tempered glass with a nominal thickness of .156"/.188" on obscure or clear framed panels or other safety glazing materials to conform to Federal Standard CPSC 16 CFR 1201 Category 1 and 2, Safety Standard for Architectural Glazing Materials. Dimensional tolerances shall conform to ASTM C 1036-85 and ASTM C 1048-85.

For detailed information concerning the mechanical properties of tempered glass download the following files from the Alumax Bath Enclosures website at [www.alumag.com](http://www.alumag.com):

TECHGLAS.ZIP, GLASPROP.ZIP

8. Vinyl Seals:

<b>a. MECHANICAL PROPERTIES OF FLEXIBLE COMPONENT</b>	
<b>Dual Durometer Vertical Jamb Seal and Bottom Deflector Plasticized, filled with Shore A Durometer Hardness of 65</b>	
Tensile Break Strength	1100 psi
Ultimate Elongation	360%
Specific Gravity 23/23 C	1.39
Shore "A" Hardness Initial	65
@ 10 sec.	61
Brittleness Point, F - 50% Failure @	-33

<b>b. MECHANICAL PROPERTIES OF RIGID COMPONENT</b>			
<b>Dual Durometer Vinyl Seals</b>			
<b>Property</b>	<b>ASTM Method</b>	<b>Units</b>	
Specific Gravity	D792	-	1.34
Hardness Durometer D	D2240	-	85
Rockwell R	D785	-	107
Tensile Strength	D638	psi	6,350
Flexural Strength	D790	psi	12,400
Izod Impact, 1/8" Notched	D256	ft.lb/in	15.0
Optical Clarity -	D1003	%	74
Transmittance Haze (.65 mil)		%	5
All data obtained at 73° F from injection molded test specimens prepared per ASTM D647 and D1897			

9. Finish Specifications (Anodized): The finish on anodized aluminum components shall conform to the following Aluminum Association Specifications:

- a. Silver: AA-M21-C31-A21 for buffed, clear, bright anodized aluminum.
- b. Gold: AA-M21-C31-A23 for buffed, colored, bright anodized aluminum.

Anodized aluminum components are tested or inspected for thickness of anodic coating (.00015" min.\.00030" max.), color range variation, and integrity of the anodic seal.

**NOTE:** The finished surface of anodized aluminum parts can be damaged by harsh cleansers. In particular, glass cleaners or other cleaning products with a PH of less than 7 or more than 9 can damage the anodized finish with prolonged exposure.