

## 540/550 Specifications

### A. UNIT FEATURES

1. Fully adjustable, sealed, heavy duty ball bearing rollers. Up and down adjustment of panels is plus or minus .156".
2. Easy clean, self-draining tub track.
3. Molded nylon panel guide of sufficient height to prevent the accidental dislodging of interior panel.
4. Molded jamb bumpers with concealed fasteners.
5. Dual exterior towel bar with extruded aluminum brackets and finger pulls. **Towel bars are not to be used as grab bars.**
6. Reversible header design.
7. Available in tub (540) and shower heights (550).
8. Detailed instruction sheets and cross sections with custom unit fabrication formulas.
9. Optional installation video.
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:

Maximum allowable height of unit = 72"

Maximum allowable width of unit = 72"

Deflection of header on maximum sized unit with 5/32" glass = .190".

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-585	Panel Side Rails	.040" - .050"
SC-600	Panel Top Rails	.040" - .055"
SC-601	Panel Bottom Rails	.040"
SC-583	Header	.050" - .062"
SC-586	Wall Jambs	.045" - .050"
SC-602	Tub Track	.062" - .078"
SC-634	Towel Bar	.062"
67339	Towel Bar Bracket	.062"
67340	Finger Pull	.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.

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

- 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.
- b. Roller Bearings: Maximum load (2 bearings) – 60 lb., Estimated life of bearing 75,000 cycles minimum.

<b>c. PANEL GUIDE</b>			
<b>Mechanical Properties of Base Material</b>			
<b>Property</b>	<b>ASTM Method</b>	<b>Units</b>	
Tensile Strength	D638	psi	16,500
Elongation @ break	D638	%	15
Elongation @ yield	D638	psi	4
Flexural Modulus at 73° F	D790	psi	470,000
Izod Impact at 73° F, Notched	D256	ft lb/in	1
Deformation under load at 2000 psi	D621	%	1.4

6. Glazing Vinyls: 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>a. MECHANICAL PROPERTIES OF 540/550 GLAZING VINYL</b>	
<b>Plasticized, filled with Shore A</b>	
<b>Durometer Hardness of 60</b>	
Tensile Break Strength	920 psi
Ultimate Elongation	600%
Specific Gravity 23/23 C	1.28
Shore "A" Hardness Initial	61
@ 10 sec.	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. 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.