

992 Specifications

A. UNIT FEATURES

1. Adjustable, ball bearing rollers. Four bearings per panel. Two bearings at top and two at bottom.
2. Controlled sliding panels secured at top and bottom.
3. Latch to be permanently mounted magnetic strips.
4. Full length extruded handles.
5. Adjustable wall jambs for precise fit to wall conditions.
6. Corner entry design for ease of entry in confined spaces.
7. Detailed instruction sheets and cross sections with custom unit fabrication formulas.
8. 24 hour product information and support via the **Alumax Bath Enclosures Website** (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. Maximum height 72" Maximum width 48" x 48".

b. Clear opening of door with sliding panels open to maximum = 1/2 side centerline dimension.

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.

MECHANICAL PROPERTIES OF 6463-T6 (b)					
Thickness in inches (b)	Tensile Strength - ksi				Elongation percent min. in 2 in. or 4D
	Ultimate		Yield		
	min.	max.	min.	max.	
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.

Component	Description	Nominal Wall Thickness
67145	Wall Jamb	.062"
67143	Fixed Panel Jamb	.062"
67144	Fixed Panel Side Rail	.062"
67362	Fixed Panel Top & Bottom Rail	.062"
SC-562	Sliding Panel Side Rail	.050"
67184	Sliding Panel Top Rail	.050"
67146	Header	.062"
67146	Curb	.062"
SC-506	Curb Fill	.050"
67286	Handle	.050"
67287	Handle	.050"

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:

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.**

Bearing shall be unground radial bearing, insert molded outer race, Ultra Seal 500 plating, 3/32” diameter 440 C grade stainless steel balls. Significant surfaces shall meet requirements per ASTM B117 for salt spray testing.

MECHANICAL PROPERTIES OF 992 VERTICAL PANEL SEAL Plasticized, filled with Shore A Durometer Hardness of 65	
Tensile Break Strength	1100 psi
Ultimate Elongation	360%
Specific Gravity 23/23 C	1.39
Shore "A" Hardness Initial @ 10 sec.	65 61
Brittleness Point, F 50% Failure @	-33

992 CORNER INSERT Mechanical Properties of Base Material			
Property	ASTM Method	Units	
Tensile Strength	D638	psi	16,500
Elongation @ break	D638	%	15
Elongation @ yield	D638	psi	4
Flexural Modulus @ 73 F	D790	psi	470,000
Deformation under load @ 2000 psi	D621	%	14

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.

MECHANICAL PROPERTIES OF 992 GLAZING VINYL Plasticized, filled with Shore A Durometer Hardness of 60	
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:

TECHGLAS.ZIP, GLASPROP.ZIP

8. Finish Specifications (Anodized): The finish on anodized aluminum components shall conform to the following Aluminum Association Specifications:
- Silver: AA-M21-C31-A21 for buffed, clear, bright anodized aluminum.
 - 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.

9. Finish Specifications (Painted)

Painted components shall conform to AAMA 603.8, Voluntary Performance Requirements and Test Procedures For Pigmented Organic Coatings On Extruded Aluminum.

Material used is polyurethane powder coating.

TYPICAL PROPERTIES OF 992 POWDER COATING		
Property	ASTM Method	
Specific Gravity, PCI #4	---	1.2 – 1.9
Gloss	D523	5 – 95+
Pencil Hardness	---	H – 2H
Impact	D2794	To 160 Inch lbs
Mandrel Bend	D522	1/8 Inch
Cross Hatch Adhesion	D5339	Excellent
MFK resistance, PCI #8	---	50 Double Rubs
Abrasion resistance	D1044	Good
Salt Spray	D8117	500 Hrs. Min
Film Thickness	D1186	1.0 – 4.0 Mils