



Company Information

PalmSHIELD

12330 Cary Circle
La Vista, NE 68128

For over fifty years, we have been designing, engineering and installing industrial equipment screen walls, industrial louvered screen, mechanical equipment enclosures and architectural screening systems. In addition to our custom louvered screen wall fabrication division, PalmSHIELD fabricates square welded and woven wire mesh screen, grating, and perforated metal screen. You can find our work from the base of the Grand Canyon to the midst of the Yellowstone Forest. PalmSHIELD is the ultimate architectural equipment screening.

Our fabrication division operates in a ninety thousand square foot facility that provides complete fabrication and coatings. Our team is led by a seasoned group of certified welders, coaters, project engineers and drafters. All we do is custom fabricate architectural products. Perforated metal, square woven and weld mesh, grating, industrial louvers and welded wire mesh screens are some of our top products.



We have installed other manufacturer's louvered, perforated metal and square mesh screen systems over the years. Our experience with these systems was not satisfactory. Our systems are designed to overcome all of our challenges in delivery, installation and sustainability. Having installed hundreds of screen wall systems and thousands of gates, we know a few things about what works and what does not.



What sets PalmSHIELD above all others is its fully framed manufactured panels and ease of installation. This rigid and robust frame protects the louvers, perforated metals, grating, cable railing and welded wire mesh during shipping, installation and for years to come. No assembly required. Our gates are manufactured first as standalone gates. We then fit our PalmSHIELD infill panels.

Our system is designed with the installers in mind. All of our panels and posts are factory aligned, then drilled and punched. All of our hardware is factory installed, removed and packaged. We factory install all the cabling for our cable railing. We are often not only the manufacturer but the installers as well. Our direct line of communication with the field gives us constant feedback and motivation to get it right.

PalmSHIELD has designed its own line of industrial hinges: the Gorilla Hinge. This hinge uses a half inch thick plate to mount to both the gate and gate post. The Gorilla hinge has a slight offset on the hinge plates to allow the gate to slightly close past full close. This intended design quirk was incorporated because we realize that not everything happens exactly like you want it to in the field. Sometimes, the gate posts are set an eighth to a sixteenth of an inch out of square. This is not noticeable at the post but a typical hinge would not allow the gate to come to a full close if the gate post was not set perfectly square. We empathize with these field irregularities and believe it is our responsibility to find a solution to offer our customers some flexibility.



PalmSHIELD louvered screening, walls, perforated metals, welded wire mesh and grating systems are perfect for providing excellent ventilation while keeping items out of sight from others. Using the industries' only picture frame design, each panel is rigid enough to stand on its own. Maintaining a consistent design throughout the system, PalmSHIELD can be configured as a series of screens, grills, swing gates and even sliding gates.

PalmSHIELD is custom fabricated to each application, allowing end users to select the amount of visibility and air flow by varying louver spacing or degree of perforation. Louvers may be placed vertically, horizontally or even diagonally



SAMPSON Solid Aluminum Gate Product Data

PalmSHIELD SAMPSON Gate collection provides a permanent, upscale architectural gate for any commercial or industrial application. If you are looking for a proven engineered gate solution for dumpsters, trash enclosures and outdoor storage areas, the Sampson is an excellent and affordable solution. The SAMPSON gate collection incorporates an extruded tubular aluminum framework that encapsulates the wide variety of infill options. Our aluminum framework is a U-shape, providing a full finished edge on all four sides of the gate infill materials. This is an architectural gate solution when aesthetics matter. PalmSHIELD commercial gates are available in a wide variety of infill options including composite wood, vinyl, aluminum and louvers. When architecture matters, our planks may be placed in a modern horizontal or traditional vertical pattern. Unlike any other commercial and industrial gate manufacture, SAMPSON commercial gates are sweep blasted and powder coated. We offer an endless number of colors.

PalmSHIELD gates are custom designed and engineered to your commercial and industrial openings. We apply a series of engineering principles, accounting for the effects of the cantilevered load and wind load. No need to worry about future failed or sagging gates with

our fully welded tubular framework and cable truss design on larger gates. PalmSHIELD has successfully built thousands of gates over the last thirty years.

PalmSHIELD understands commercial and industrial gates rely on the little things for continued operation. PalmSHIELD incorporates their own custom designed Gorilla hinges. These are not your ordinary hinges. Our industrial gate hinges utilize half inch thick bearing plates attached to a two inch wide stainless steel barrel. Our commercial gates are too good for unsightly padlocks and wearing slide bolts. Only PalmSHIELD offers an internal commercial locking system with our Locinox re-keyable stainless steel and brushed aluminum locks. To hold our gates in-place, PalmSHIELD incorporates a one-inch schedule forty and padlock-able drop pin on every commercial and industrial gate leaf.

The solid aluminum screening incorporates a very modern tubular design. The aluminum tongue and groove planks set horizontally or vertically to match your facilities' exterior finishes. The tongue and groove planks are very attractive with chamfered corners and middle structural indentation.



SAMPSON Solid Aluminum

Gate Materials Technical

Data

PalmSHIELD complies to the following standards:

- A. ASTM B 209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- B. ASTM B 221 – Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles and Tubes.
- C. ASTM D3363 – Standard Test Method for Film Hardness by Pencil Test.
- D. ASTM D2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation.
- E. ASTM B117 – Standard Practice for Operating Salt Spray Apparatus.
- F. ASTM D822 – Standard Practice for Filtered Open- Flame Carbon-Arc Exposures of Paint and Related Coatings.
- G. AWS D1.2 Structural Welding Code
- H. Aluminum. Extruded Aluminum: ASTM B 221, Alloy 6063 – Temper T-6.
- I. Sheet Aluminum: ASTM B211, Alloy 6063 - Temper T6

PalmSHIELD incorporates the following materials and design characteristics into our SAMPSON Solid Aluminum Gate:

Gate Panel Infill Description:

1. Gate Height: Varies
2. Gate Width: Varies; Widths over 12', verify with manufacturer
3. Gate panels consisting of horizontal planks fabricated with extruded aluminum framing structural profiles and supports by extruded aluminum fence posts.

4. Infill. 6" x 1" tubular slat tongue and groove slat, T-6063 as shown on plans and based on screen height

Gate Frame Description:

1. Gate shall have welded frame fabricated from extruded aluminum tubing with aluminum panels to match fencing material. Frame configurations shall be as indicated on the contract drawings
2. Welded frame, 2" x 3" U-Shaped extruded tubular T-6063 aluminum with infill to match fence infill

Gate Posts:

1. Gate panel post selection as shown on the plans and per manufacturer's selection.
2. Gate posts may be T-6063 aluminum or A-500 tubular steel as per manufacturer
3. Gate posts will be capped.

Anchor Bolts: Anchor bolts shall be adequate to support loads based on screening height, exposures and loading.

Gates Hardware:

1. All fittings and accessories shall be stainless steel and sized as specified by the fence manufacturer.
2. Gate hinges to be Gorilla barrel hinge with ¾" rod, ball bearing, and grease zert. Hinge plate to be ½" thick plates offset to create a 5/8" gap. Standard hardware as required by the gate manufacturer for complete functional operation. Hinges to be bolted to gate frame and field welded to steel gate posts.
3. Gate lock to be Locinox FortyLock mortise lock. Lock to be industrial and polished 100% stainless steel locksets include a keyable cylinder and auto-latching mechanism. Lock to be internal lock with exterior grab handles. Lock may be keyed and rekeyed. Lock is accessible from both sides of gate.
4. Drop rods to be 1" schedule 40 pipe and through bolted to gate frame.
5. Hardware: Size and type as determined by the manufacturer. Provide two hinges per leaf.
6. Gate posts shall be as determined by manufacture. Gate posts to be specified to support gates.



SAMPSON Solid Aluminum

Gates Coating Standards

Technical Data

PROCESS

PalmSHIELD powder coating process and standards are based on a three-step process.

Step 1. Removal of oil, dirt, lubrication greases, metal oxides, welding scale etc. is essential prior to the powder coating process. PalmSHIELD utilizes both phosphates spray application and sweep blasting the surface. The use of a phosphate spray consist of degreasing, etching, de-smutting, various rinses and the final phosphating of the substrate. The pre-treatment process both cleans and improves bonding of the powder to the metal. Blast media and blasting abrasives are used to provide surface texturing and preparation, etching, finishing, and degreasing.

Step 2. Applying the powder. The most common way of applying the powder coating to metal objects is to spray the powder using an electrostatic gun. The gun imparts a negative charge to the powder, which is then sprayed towards the grounded object by mechanical or compressed air spraying and then accelerated toward the workpiece by the powerful electrostatic charge.

Step 3. Curing the powder. When a thermosetting powder is exposed to elevated temperature, it begins to melt, flows out, and then chemically reacts to form a higher molecular weight [polymer](#) in a network-like structure.

STANDARDS

PalmSHIELD meets and exceeds the following standards for applying our factory finish to aluminum fence panels, posts and gates to receive a polyester powder coating.

Polyester powder coating:

Electrostatically applied colored polyester powder coating heat cured to chemically bond finish to metal substrate.

Minimum hardness measured in accordance with ASTM D3363 2H.

Direct impact resistance tested in accordance with ASTM D2794. Withstand 160 inch-pounds.

Salt spray resistance tested in accordance with ASTM B117: No undercutting, rusting, or blistering after 500 hours in 5 percent saltspray at 95° F and 95% relative humidity after 1,000 hours, less than 3/16 inches undercutting.

Weatherability tested in accordance with ASTM D822: No film failure and 88 percent gloss retention after 1 year exposure in South Florida with test panels tilted 45°.

PRODUCT

PalmSHIELD uses only the highest quality products. Using PPG, Peridium TGIC Polyester powder coatings offering excellent application and performance characteristics. Peridium's tightly controlled particle size distribution provides extremely good first pass transfer efficiencies and edge coverage along with the smoothest film available. Long term exterior durability, high performance mechanical properties and overbake resistance are also common characteristics of these premium TGIC polyester coating

Cured Film Properties:

PCI Powder Smoothness Rating 8-9 (high gloss)
Specific Gravity (ASTM D792) 1.2 to 1.8 Adhesion (ASTM D3359) 5B (100%)
Gloss (ASTM D523) 30-99
Pencil Hardness (ASTM D3363) H-4H Impact (ASTM D2794) 160 - 240+ inch lbs.
Flexibility (ASTM D522) 1/8 inch - No fracturing
Humidity (ASTM D2247) 1,000+ hours

Salt Spray (ASTM B117) 1,000+ hours



SAMPSON Solid Aluminum
Gate Continued Product
Care Technical Data

PalmSHIELD SAMPSON Solid Aluminum Gates should not further maintenance and care beyond customers best intentions to clean the product.

In the event you do wish to wash the product, we recommend using a high quality car wash soap or nonabrasive dish wash soap.

Using a nonabrasive wash mitt or sponge, gently scrub the product back and forth to remove any dust or debris. Once finished, gently hose off the remaining soap.

Do not use a power washer, abrasive tools, or scrapers.