

## Technical Data Sheet No: LP-105.3 Pic Perf Specification

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Pic Perf is a digitally created image produced in Perforated Metal. Pic Perf is available in a wide variety of specifications, and is ideally suited for many image types, including:

- Corporate Logos
- Abstract Artwork
- Detailed Lettering
- Photographs
- Silhouettes



### Environmental Factors to Be Considered

Pic Perf can be created using positive or inverted images, depending on the environmental conditions. It is important to accurately assess the environment, to ensure the type of image is correctly selected for your project.

Pic Perf utilizes the holes and background color to create the image. Background lighting and viewing distance are essential considerations.

A positive image relies on a dark or solid background whereas an inverted image relies on an illuminated background; either natural or synthetic light. The environment and image selection will also dictate whether sheets are coated in a light or dark color. Inverted images are typically coated in a dark color and positive images coated in a light color to achieve the best contrast between the foreground and background. There are no cost penalties for using either a positive or inverted image.

Discuss your project with a Valmont® Structures Architectural Facades product line technical representative at the outset, to ensure you achieve the best results.

### Viewing Distance

The distance between the Pic Perf panel and the viewer is also important in determining the final design. There is an ultimate viewing distance at which the image is the clearest. Viewing from closer or further away will result in the image being harder to see.

The ultimate viewing distance determines the range of hole sizes used in the image, for example a panel produced for a foyer wall will utilize smaller holes than panels cladding the side of a building.

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### Materials

Almost any malleable material can be perforated, including Aluminum, Mild Steel, Corten (HW350) Stainless Steel, Copper, Brass, Pure Zinc and some plastics. Valmont® Structures Architectural Facades strongly recommends aluminum be used for external applications due to its high resistance to corrosion and light weight nature.

The thickness of the material is generally determined by the size of the screen canvas area and the detail required in the image.

Stainless Steel is only suitable for 2 tone images or applications where only text is required. Mild Steel or steel based materials such as galvanized steel, zinc seal or zinc anneals should only be used for internal applications, unless the sheets are hot-dip galvanized and painted after perforating. However, this secondary coating process can affect the image by blinding smaller holes and hence is usually avoided. In addition, Valmont Structures cannot guarantee the sheets will be 100% flat after hot-dip galvanizing.

Some of the benefits of using steel are its inherent strength and spanning properties. Hence it's better to use in areas where large spans or strength are required or vandalism may be of concern. It is the responsibility of the buyer to ensure suitable preparation of steels and coatings are applied or specified when using ferrous based steels for external applications. Valmont Structures takes no responsibility for corrosion when using steel externally.

	Steels	Pre Zinc Coated Steels	Corten HW350	Aluminum	Stainless Steel	Brass or Copper	Pure Zinc
<b>Electro Galvanizing</b>	Y	N	N*	N	N	N	N*
<b>Hot-Dip Galvanizing</b>	Y*	N	N*	N	N	N	N*
<b>Powder Coat</b>	Y	Y	N*	Y*	Y*	N	N*
<b>Anodize</b>	N	N	N*	Y*	N	N	N*
<b>Finish</b>	N	N	N*	Y	Y	N	N*
<b>Electro Polish</b>	N	N	N*	N*	Y*	N	N*

\* Y/N indicates suitability for coating the particular substrate.

\* Denotes the material and coating combination is suitable for external use.

### Sheet Sizes

The most economical sheet sizes to use are:

- 68" x 32"
- 68" x 44"
- 92" x 44"
- 92" x 56"
- 116" x 44"
- 116" x 56"

Note: The sizes above are ideally suited to 0.125in aluminum if using an alternative material or thickness, other sizes may be preferential. Talk to your Valmont Structures Architectural Facades product line technical representative for advice on the best sizes for the chosen material.

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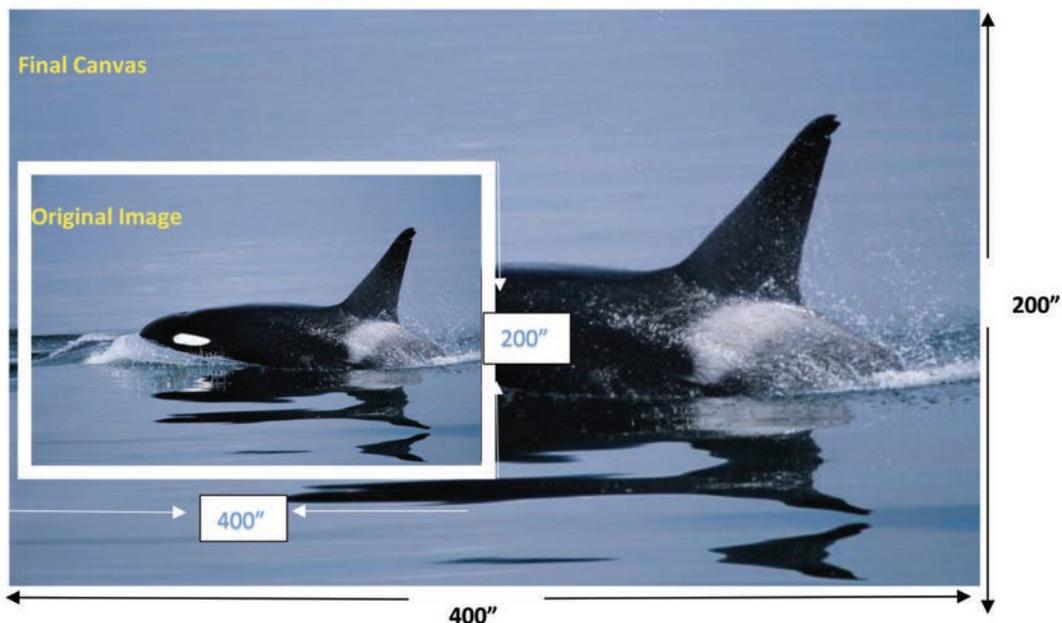
In installations where the image spans multiple panels, sheets can be custom manufactured to any size; however they usually don't exceed 116in x 56in Valmont® Structures can produce larger sheets, however it is recommend you discuss your project with Valmont Structures Architectural Facades product line technical representative in order to achieve the best results.

### Aspect Ratio

The aspect ratio (the ratio of length to width) of the image must be in proportion with the final screen (or installation) canvas area. A change in aspect ratio may mean the image has to be stretched or cropped, altering the final appearance.

In extreme cases, the image may not be suitable for the final installation.

### Image



### Costing Pic Perf

The cost of Pic Perf is based on a combination of image detail and the size of the final screen canvas. Material choices also have a bearing on the final price.

The level of detail in the image and size of the final screen canvas dictates the size and volume of holes used to create it. A smaller screen canvas, generally viewed from close range will typically use smaller holes and more of them to create an image. As the screen canvas area becomes larger, both horizontally and longitudinally (must become larger in both directions), so do the holes and the hole centers.

Therefore, creating an image on a smaller screen canvas will be more expensive per M<sup>2</sup> than creating the same image on a large canvas. Images spanning a number of panels, e.g., a building facade are more economical per M<sup>2</sup> than a small single panel image.

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### **Bolt Holes**

Valmont® Structures Architectural Facades can incorporate bolt holes during manufacturing, ensuring panels are ready for installation. When bolt holes are incorporated into the design they become integral with the image. They also prevent having to use various size washers to accommodate the frequently changing perforation sizes or any unnecessary onsite drilling of the finished product which may compromise the coating.

Bolt holes should be discussed with your Valmont Structures Architectural Facades product line technical representative before any support structure is erected to ensure the vertical and/or horizontal supports are adequately spaced and sized to suit bolt hole positions. Generally only minor alterations may be required.

### **Fixings - (Isolator, Spacers and Fasteners)**

Valmont Structures Architectural Facades L11.1, from the Architectural Facades product line, is simple to use. A Perf Isolator can be used to eliminate any potential corrosion between different metals and it will also provide room for thermal expansion around the bolt holes. Upon request, spacers and powder coated fasteners can also be supplied to suit the isolators. Isolators are designed to suit an M6 screw or bolt. The spacers aid in setting the panels off the support structure assisting the structure behind to fade into the background.

### **Drawings / Proofs**

Prior to the production of a Pic Perf panel(s), Valmont Structures Architectural Facades will provide a proof. All care is taken to ensure this proof is as accurate as possible in representing the final image, indicating the effect of different perforated patterns and varying image definition. Although the representation will be accurate, environmental conditions and the color scheme can be critical contributors to the final appearance of the perforated Pic Perf screens. Apart from a representation of the perforated graphic, proofs also include panel sizes, dimensioned panel splits, panel orientation, dimensions of gaps at intersections, perimeter borders, a grid for panel identification, end elevation or cross section, if any folding or curving is involved and bolt hole sizes and centers, where appropriate.

Customer approval of the final proof is required prior to production commencing.

### **Installation**

Valmont Structures Architectural Facades is happy to provide details of installation companies for your consideration. In installations where the screen canvas area is made up of multiple panels, Valmont Structures will provide a proof detailing the artwork together with a grid layout, identifying the position of each panel. All panels will be branded with corresponding ID numbers for fast, simple identification of panel positions.

Once the client provides final dimensions of the support frame, preferably in Auto Cad DWG files, Valmont Structures will super impose the screens and bolt holes over the supports and design them, so they can be easily and accurately fitted on site. Valmont Structures will also recommend gap dimensions at the intersections of panels. It is recommended that the suggested support centers are provided to Valmont Structures prior to erecting them on site and prior to production of the panels. To ensure the positioning and face size is suitable for the available screen sizes and bolt hole positions. Valmont Structures may need to adjust the support size or centers to suits.

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Installation requirements are important, as panels can be provided without borders, in order to achieve a continuous image across several sheets. Please discuss the project requirement with your Valmont® Structures Architectural Facades technical representative in order to maximize the result.

### **Information Required for Budget Pricing:**

- Proposed image (electronically if possible), File format in order of preference - Adobe Photoshop PSD, JPEG, TIFF, Bitmap BMP or PDF. Most file formats except Post Script can be used. If not please advise type of image .e.g., picture, abstract, text.
- Support frame drawings (if available)
- Screen canvas size for each image (Length and Width)
- Type of material
- Type of finish or coating
- Project name / specifications

Contact your local Valmont Structures Architectural Facades technical representative for any other queries.

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