

## STEEL FINISHES AVAILABLE FROM ROMTEC

**Romtec is pleased to offer a wide variety of finishes for the steel components included in our buildings.** Romtec buildings vary in design and can include a few steel components like doors and frames, or an entire steel structure such as our steel pavilions and shelters.

### Typical steel components include:

- Doors and frames
- Vents
- Trusses and posts
- Structural brackets and lintels
- Window frames



### Types of Steel Finishes offered by Romtec

#### 1. Primed by Romtec to be painted on-site by the Building Installer

Romtec can supply all steel surfaces primed and ready to be painted the color of your choosing by your installing contractor.

##### a. Pros:

- i. Romtec providing primed surfaces that are ready to paint allows you to work with your contractor on the finish paint color that you want. It also allows you to make your color selection after the building package has been delivered and is being constructed if you so choose.

*Note: Romtec requires all pre-finished color selections be made prior to producing the building package. In other words, the color selections will be made prior to the building package arriving on site.*

- ii. The primed option offers you the most flexibility for picking finish colors. In some situations there is an existing structure on-site and you want to match specific colors. Having the structure painted on-site allows you to color match, test, and make adjustments in color as needed to ensure that

## STEEL FINISHES AVAILABLE FROM ROMTEC

the final finished product meets your expectations for the overall site cohesiveness.

*Note: Picking colors from color charts is not a guarantee that the finished product will look like the samples. On-site color matching is recommended by Romtec in this situation.*

- iii. Providing your own painter allows you to control the cost and quality of the paint finish. You can get bids from local contractors or use a repeat contractor that has a known level of quality.

### b. Cons:

- i. It is the customer's responsibility to provide the finish.

## 2. Primed and Painted by Romtec prior to delivery

Romtec will prime and then paint all steel surfaces prior to delivery for ease of installation.

- a. The priming preparation process includes sandblasting the metal surface prior to applying primer to remove rust, scale, or any other surface dirt. All foreign material is blown off and removed. The components are then moved to a prep bay to ensure all items are clean and ready to begin the priming process before they are moved into the Paint booth.
- b. Once they are in the paint booth, the booth is brought to operating temperature and the components are sprayed with an epoxy primer. The gray epoxy primer has a 48-hour cure window meaning all items must be painted within 48 hours of being primed.
- c. A single stage paint provided by NorthStar is then used for the finish coat. NorthStar's coatings are characterized by higher gloss, faster dry times, better coverage, and superior durability. This process allows Romtec to get full coverage with a high gloss finish with two coats of paint.

### d. Pros:

- i. Romtec will work with you to pick a paint color and will then use our professional painters to prep, prime and paint the steel surfaces for a clean appearance on the finished building.
- ii. Touch-up paint will be supplied by Romtec for any incidental scratching of surfaces during installation and use of the building. Touch-up painting is a routine maintenance operation that is expected of painted surfaces.

### e. Cons:

- i. **Providing a quality paint finish that is durable enough to handle shipment and construction has a higher cost than having an on-site, local painter come to the jobsite to paint the materials after installation.**

## 3. Powder Coated

Romtec offers powder coating of steel surfaces as another option. Powder coating is a finishing process in which a coating is applied electrostatically to a surface as a free-floating, dry powder before heat is used to finalize the coating.

The powder coat preparation process includes cleaning and decontamination of any grease or oils prior to sand blast. Once metal is clean of oils and grease, it is then

## STEEL FINISHES AVAILABLE FROM ROMTEC

sand blasted. Metal is then hung, hand sanded if needed, and then cleaned with air. The metal is then "pre-cooked" to "out gas" the metal which ensures that outgassing does not occur when the finish has been applied. Finally a polyester powder coat is "shot" over the raw steel and is then baked on to the powder coat manufacturer specifications.

**a. Pros:**

- i. Powder coating yields a thick, hard finish that is tougher than conventional paints.

**b. Cons:**

- i. Powder coating is a baked on finish that requires the component to be put in a large oven to complete the application process. This limits the size of the component that powder coating can be applied to.
- ii. Field painting is often the only way to re-finish a powder coated surface Unless the building component can be removed, taken to a powder coater for a fresh coating, and then re-installed,.
- iii. Powder coating is not ideal for salt air environments as the steel will eventually rust over time and then the components will need to be either re-powder coated or painted. As an example, ships are continually being painted, they are not powder coated.

### 4. Powder Coat with Under Coat

Romtec also offers powder coating with an additional under coat. This is an additional layer of powder coating that provides extra protection for the component being finished.

**a. Pros:**

- i. Increased corrosion protection from standard powder coating.

**b. Cons:**

- i. Increased cost.
- ii. When it fails painting will be the only in-place method for repair.

### 5. Galvanizing

Galvanizing is a process in which a zinc film is deposited on goods made of steel to provide additional corrosion protection and abrasion resistance. The most common process for galvanizing requires that the component be dipped in a tank of super-heated zinc.

**a. Pros:**

- i. Galvanizing provides a layer of corrosion resistance.
- ii. Galvanized surfaces can be left as a finished product or can be painted or powder coated for an additional layer of protection and architectural finish.

**b. Cons:**

- i. The component needs to be able to handle the high temperatures of the dipping process. This may require the steel thickness of the component to be increased to ensure that it does not warp. This may result in a price increase as the thickness may be dictated by the galvanizing process instead of the intended use.

## STEEL FINISHES AVAILABLE FROM ROMTEC

- ii. The size of the component being dipped is also limited by the size of the galvanizing tank. This is a limiting factor in the design of the structure and how it is assembled (increased number of smaller assemblies rather than fewer large assemblies which requires more install labor).
- iii. Galvanizing also requires that holes be drilled in the structure to allow the excess zinc to drain after dipping, and to ensure that there are no enclosed air pockets that could explode due to the heating of the component. These holes then need to be capped after galvanizing and ground flush.
- iv. Galvanizing is an upcharge from the standard steel priming process.

### 6. Stainless Steel

Almost all products manufactured from plain steel and then finish coated can instead be made of stainless steel that has increased rust resistance. There are two main grades of stainless steel, 304 and 316 that are used in the manufacturing of the components. 316 stainless steel is a higher grade than 304.

#### a. Pros:

- i. Stainless steel offers increased corrosion resistance from plain steel.

#### b. Cons:

- i. Stainless steel has a higher material cost than plain steel.
- ii. Not all steel products are readily available in stainless steel and lead times may increase for specific products such as doors and frames.
- iii. Stainless steel is harder to work with during fabrication. It has a tendency to warp under high heat making it difficult to weld lighter gauge material. Much like galvanizing, the fabrication process can dictate the design instead of the intended use, and require thicker gauge material which increases cost.
- iv. Stainless steel will still rust over time.

### What to Consider when Selecting a Finish

#### a. Is the site a wet or dry environment? Is the site a coastal environment with salt in the air?

Coastal and wet environments increase the likelihood that steel will rust in the near future. Routine maintenance should include touch-up painting in this situation. Powder coating and/or galvanizing is not a fail-safe approach.

#### b. Is vandalism a concern at the site?

While powder coating offers a more durable finish than paint, it is not vandal proof. Scratched or chipped powder coating will either need to be re-powder coated or painted in the field. It is not always possible or cost effective to remove items from an existing structure and have them re-powder coated.

#### c. Are there existing finishes on site that need to be color matched?

Unless the same component manufacturer (ex. Metal Roofing) and color is being selected as on the previous structure, color matching is best done on-site with the painter providing mock-ups to ensure the closest match. Any painting or powder coating done away from the final location could vary slightly from samples, color charts, photos, etc. and not provide the desired level of color matching.

## STEEL FINISHES AVAILABLE FROM ROMTEC

*Note: Romtec cannot guarantee that colors selected from different manufacturers will match. For example, a roofing color and door powder coat color may look like a match in a sample, but may not truly match when the building package delivers.*

### **d. Cost**

Cost is typically a driving factor in choosing from the many options available for steel finishes. Cost needs to be looked at both initially (cost of finished materials) and in the long run for maintenance (cost of upkeep over time). Initial vs. long term cost needs to be reviewed with the environment and public use/vandalism in mind.

### **e. Maintenance**

All steel finishes will fail over time. Even a galvanized steel component with multiple layers of powder coating will eventually succumb to the elements and begin to rust. The steel finish is not guaranteed to last for any specific amount of time as it can fail for many environmental and/or general use reasons. Climate (wet/dry/coastal), public use, and maintenance are the three key factors in the longevity of a steel finish and all are specific to the location and application of the project.

*Note: Romtec does not provide a guarantee on any finish beyond the standard one year warranty.*